BULLETIN OF THE

TAYLOR SOCIETY

AN INTERNATIONAL SOCIETY TO PROMOTE THE SCIENCE
AND THE ART OF ADMINISTRATION AND OF MANAGEMENT

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Spring Meeting Papers on Various Phases of INDUSTRIAL PLANNING

McFall Hovey Cowan

Engineering Societies Building
29 W. Thirty-Ninth St.
New York

JUNE, 1931 VOL. XVI, NO. 3

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The objects of this Society are, through research, discussion, publication and other appropriate means:

1. To secure—for the common benefit of the community, the worker, the manager and the employer—understanding and intelligent direction of the principles of administration and management which govern organized effort for accomplishing industrial and other social purposes.

2. To secure the gradual elimination of unnecessary effort and of unduly burdensome toil in the accomplishment of the work of the world.

3. To promote the scientific study and teaching of the principles governing organized effort, and of the mechanisms of their adaptations and application under varying and changing conditions.

4. To promote general recognition of the fact that the evaluation and application of these principles and mechanisms are the mutual concern of the community, the worker, the manager and the employer.

5. To inspire in labor, manager and employer a constant adherence to the highest ethical conception of their individual and collective responsibility.

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Contents

Comment 89

Charles Day 90

Planning Industry 91
By Robert J. McFall

Cost Accounting and Budget Making . 97
By Floyd F. Hovey
Discussion by John Balch, Arthur W. Marshall, Eugene Y. Allen, Floyd F. Hovey, George M. Arisman, George G. Berger

Driving Forces in the Sales Plan . . 108
By Stuart DuBois Cowan
Discussion by Stanley I. Clark, Archibald M. Crossley, W. E. Freeland, Paul T. Cherington, Stuart DuBois Cowan

A Visit to Boxly 134

Participation in European Management Events 134

Past President Addresses College . . 135

Back Numbers Wanted 135

Reviews 135

Books Received 140

Comment

IN THE quality of the papers, discussions, attendance and interest, the spring meeting in Philadelphia, April 30-May 1, was the equal of any meeting which the Society has held. For this gratifying record the Society is indebted not only to the immediate participants, but also to Philadelphia members and a general committee of distinguished commercial and industrial leaders of the city. The first installment of papers and discussions appears in this issue of the Bulletin.

AN EXAMINATION of the files of newspapers which are accustomed to report at length the substance of public addresses will disclose that during the past winter there has been an unprecedented number of suggestions concerning "ways out" of present commercial and industrial troubles. In several addresses the Managing Director of the Taylor Society has ventured to make suggestions more comprehensive and less political in nature than those usually reported. It should be borne in mind that these are not official suggestions of the Taylor Society but an example of that individual speaking which the Taylor Society encourages. Dr. Person's suggestions have been labeled—

A Four-Plank Platform

1. Industry should undertake a vigorous and sustained campaign for the promotion of scientific management of individual enterprises. One of the causes of the present debâcle is the unstabilizing influence of badly managed enterprises in competitive industries. Whatever collective efforts may be made to promote regularization, their effectiveness will depend upon the wise management of all constituent enterprises.

2. Industry should establish some form of universal unemployment compensation. The burden of establishing the necessary fund should rest upon industry, and each enterprise should contribute to the fund in direct ratio to its spread between maximum and minimum payroll. Such a system of unemployment compensation would have two effects: it would stimulate enterprises to regularize their employment, just as accident compensation has stimulated them to eliminate causes of accidents; and it would establish a basic widely dis-

tributed, constant purchasing power among wage-earning consumers.

3. Industry should undertake to secure the replacement of accumulated "anti-trust" legislation by a system of comprehensive, codified legislation having the same purposes. These laws have been passed in a piece-meal, makeshift manner without definite ultimate objectives and unifying principles. The new legislation should have two objectives brought into harmony: safeguarding of society from monopolistic and other exploiting industrial activities; and freedom of industries to integrate for the purpose of promoting regularization.

4. Industry should establish a system of planning for its collective activities which would direct the efforts of its constituent individual enterprises toward a relationship of constant balance between consumer demand and the application of capital and labor to production. The technique of such collective planning should be worked out by experiment and experience. In its early stages at least, large results could be achieved by the publication of revealing current data concerning the state of industry (by specific industries and their functional activities, and by regions), by forecasts of tendencies, and by specific public recommendations to various industries on the part of a National Economic Council.

Charles Day

May 15, 1879 May 10, 1931

THE sudden death of Charles Day on May 10 was a shock not only to the many friends who knew his personality but also to that wider business community which had observed and admired his business career. He was a founder member of the Taylor Society, and although he wrote the record of his creative work in the organization and procedures of his own enterprises, instead of in general personal consulting practice or in many books, in the scientific management movement his name belongs with those of Taylor, Dodge, Goodrich, Gantt and Gilbreth.

He was born in Philadelphia May 15, 1879, and was graduated Mechanical Engineer from the University of Pennsylvania in 1899. After apprenticeship in engineering he became in 1901 a member of Dodge & Day, specializing in engineering, management and construction work. In 1911 was organized Day & Zimmermann, Inc., engineers, contractors, management auditors and managers, a firm of which he was at first president and at the time of his death chairman of the board. This firm made a notable record in construction, equipment and management of industrial plants, electric-light plants and railroads. Mr. Day had many other business interests and was a director of many industrial and public-service corporations, among them the Pennsylvania Railroad, Fidelity-Philadelphia Trust Company and the Interborough Rapid Transit Company. In addition to these major business interests he was a member of the civilian board appointed by Secretary of the Navy Meyer to investigate the efficiency of the Navy Yards, and during the World War a member of various boards: the Storage Committee of the General Munitions Board, the Depot Board appointed by the Secretary of War, engineering advisor of Col. House's Commission, Special Mission to France of the Secretary of War, and board of trustees of the Emergency Fleet Corporation. He was a member of the board of Franklin Institute and a trustee of the University of Pennsylvania.

Although not a voluminous writer, he contributed a considerable number of articles to technical magazines, and his only book, "Industrial Plants," was a significant pioneer work.

To those who knew him intimately Charles Day was more than is indicated by this formal recital of connections. Although quiet, modest, retiring and with a personality of lovable simplicity, he had the power and influence which come from energy, a scientific mind, vision, a public spirit and fearlessness. Whatever the enterprise or institution in which he assumed a responsibility, that responsibility was exercised to help its progress in the direction of public service. Identified with an industry which has had a continuing struggle with public opinion, his energy was ever exerted to bring them into harmony. No personal or institutional interest could turn him from the path of truthfulness. His testimony before a public service commission was never subtly fashioned to promote private as against public interest. He told the facts with scientific impartiality. Representatives of the public interest respected, admired and valued him. If ever the time comes when American industry feels the need of a national planning council, the personality and work of Charles Day may well serve as the model for specifications for its membership.

Planning Industry[1]

A Plea for Balance Between Labor Saving and Labor Utilization

By ROBERT J. McFALL

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PLANNING on the scale of any single industry cannot be successfully put into effect without taking into consideration the activity of business in general and the purchasing power of the potential buyers.

A fairly successful program might be developed for a specific industry if it were possible to forecast the gyrations of the general business world. At best, however, this would be but a second-rate basis for planning, for no industry can reach its optimum while the rest of the business world is sick half of the time. Moreover, even with the aid of intricate statistics, true prophets seem to be few in this generation.

Truly successful planning, for any permanent industry, must include provision for a fair degree of stabilization within the industry and for such development of its markets as may be secured and maintained. Such planning should be based upon stabilization and the healthy development of general business. If the business world in general is liable to severe and unforeseeable disturbances, no plans for any specific industry can be very dependable. If our general economic world is in danger of serious and more than temporary retrogression, any plans on the scale of a single industry are likely to prove abortive.

It would appear that all schemes so far developed to stabilize business in general have been inadequate. Up to two years ago many thought that, with greater statistical knowledge and a more highly organized banking system, business had been stabilized on a permanently higher basis; at least a higher basis than that former one where utter loss was caused by constantly recurring bad years. Such hopeful views were expressed up to the very eve of the market panic, but the panic came and also a general world-wide business depression of the first magnitude.

If statistical knowledge is what is needed for business stabilization, it would appear to some of us who are engrossed in the field that what we need is not so much more statistics, for we now have more in quantity than mortal man can well digest, but broader statistics, or knowledge from larger points of view. What good would the mere statistics on the building-tile industry be if we knew nothing of the whole building industry which is its market? The statistics on the automobile industry itself are of limited value if we know nothing of impending breakdown in the general purchasing power of the public. We need more fundamental data on the broader movements in the business world in general, and not merely statistics on finance and on specific industries.

Business as a whole has been sick for well over a year in almost the entire civilized world. The severe sickness has brought to open attention some symptoms of modern economic life that are believed by some to threaten to persist, or at least to recur with increasing severity, unless new and drastic measures are taken to overcome them.

We hear so much now of unemployment that we almost marvel when we see men actually working. The talk of overproduction has spread like an epidemic from the agricultural field until it affects well-nigh everything. Some think that we merely have underconsumption, but the difference, upon analysis, is not entirely plain. It is claimed that we have an oversupply of capital equipment and productive capacity in almost every industry; that the available equipment can readily produce many more goods than can possibly be sold, with or without a profit. Grave doubts have been raised as to the possibility of increasing sales materially by means of reducing prices. More serious even than any oversupply of productive machinery is the apparent oversupply of labor with its consequent unemployment, accompanied in turn by a loss in popular purchasing power even though wage levels are not cut. The increased use of labor-saving devices and of labor-saving schemes by the efficiency engineers, both of which are said to be essential to the well-being of individual industries but which may be subversive of the general economic well-being of the community, continue to make this situation worse.

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[1] Paper presented before a meeting of the Taylor Society, Philadelphia, Pa., April 30, 1931. This paper is entirely unofficial. Any opinions expressed are the private views of the writer.

There is enough truth in these fears and enough danger in these symptoms to challenge the most serious constructive thought of which civilized man is capable. We have grown accustomed to thinking that we can blunder out of economic difficulties as easily as we have drifted into them. There is grave reason to fear that drifting will not give us at best more than temporary relief from the present distress. There are some things in the present situation that are unusually serious and that might tend to check the development of modern industrial prosperity which, after all, is but a mushroom growth as history goes. There also are conditions today which make it less easy to throw off any setback to our economic progress.

If the present individualistic organization of society fails to meet these serious economic problems, we shall be subjected to socialistic attempts to control them. Socialism claims to have easy solutions, and the failure of our present order would almost certainly precipitate a change to socialism. The claims of socialism and communism are too sweepingly easy; sweeping promises usually fail. Moreover, whether or not socialism might be successful economically, to most of us individualistically-minded Americans such a cure would be worse than the ailment and a thing to be vigorously avoided.

Fundamental pessimism, however, seems to be unwarranted. There is every reason to believe that this generation has intelligence enough to meet and conquer its economic problems. A few brief years ago the Jeremiahs were wailing that the world's population was growing so much more rapidly than the supplies of our food and other resources that impending starvation would bring disaster. It seems strange to think that but half a decade ago our leading magazines with an intelligent class of readers were featuring such ideas. I had a lonely task then in publicly combating what now appears as the nonsensical pessimism of the neo-Malthusians, but I did succeed then, through various publications, in convincing some people that we faced no immediate problem from a shortage of food supplies. Again with the feeling of some rashness I urge the idea that the pessimists of the other extreme, the Jeremiahs of overproduction, can be routed by the intelligent application of broader knowledge to economic affairs.

There seems to be little room for hope, however, that real prosperity can be restored permanently without facing the facts which rule in the business world of today, and getting these facts under control. New economic facts have risen to prominence during these past few years, and we must really know the business world in which we live before we can gain the control which is always the objective of planning.

A quarter of a century ago the chief factor which required study and reorganization in the business situation seems to have been the banking structure. Perhaps even now the banking system is far from perfect, but it has shown itself able to carry the nation through severe stress and strain without being itself in jeopardy. Unfortunately, it has not proved itself capable of saving agriculture, industry or commerce from disastrous instability. It proved itself unable to stop the boom before the danger point was reached. As yet it has not cured depression. The experience of recent years gives us little ground to hope that control of credit, or yet control of interest rates taken alone, will go far toward creating business stability.

Perhaps it is as well that the banking forces have not been all-powerful in regulating the affairs of other branches of business. Such power, if it were attainable, would be as shocking to our ideas of individual liberty as would a system of socialism, even though the power were exercised in a beneficent manner. Stabilization of finance will help to stabilize business, but alone it cannot attain this desirable end.

Under today's economic conditions the merchant and the manufacturer cannot turn over all the problems of business stabilization to the banker and expect satisfactory results. Industry and commerce need self-help rather than outside domination.

Two major problems of economic balance confront the business world today in an entirely new manner. Each problem may have been known before in no small measure, but its degree of importance and threat of permanence are new. These are the problems of overcapacity of productive equipment and of unemployment of labor.

The problem of the capacity of productive equipment is a problem of potential, rather than actual, overproduction. There are not many fields outside of agriculture where actual overproduction is likely to go very far. Most manufacturers actually produce with a close eye on the market if not even on actual orders. Production on farms and the stocking of factories with equipment seem not to be so well related to actual demand.

There is no reasonably exact knowledge of what our productive capacity is, let alone of its relation to the consuming capacity of the market. In most industries what pass as figures for capacity are merely rough guesses or a record of actual output in what are counted as normal times. In some cases the estimate of so-called capacity is based upon a single shift, when two or three shifts are possible. The tendency to estimate capacity on the basis of performance is so strong that the result is entirely too low if there is a material amount of idle equipment in even normal times.

The whole question is complicated by the probable fact that much of the normally idle equipment is functionally obsolescent, or geographically misplaced, and should perhaps be scrapped anyway. Unfortunately, we do not even have any standard by which to determine what equipment should be counted when considering the productive capacity of an industry. No wonder that we have no exact facts on the degree of overcapacity!

Some able thinkers dispute the idea of overcapacity in normal times. Many others, however, are certain of it and rough data for many industries suggest that such overcapacity is serious in some quarters. No one, however, can deny that in the present depression our industries are working very much below their capacity, or even their optimum output. It is as certain that our industrial and agricultural systems could very easily expand their output materially beyond even their normal standards if they could market their products.

And yet we have poverty and distress in many quarters along with abundant unsatisfied desire in almost all directions. Our national credit is sound. Our productive forces are distressed because they cannot sell enough. People need much, and want more, that they cannot buy. What is wrong?

We cannot have overcapacity unless a utilization of all the capacity would result in overproduction. Can there be overproduction? The conventional economists say "No"; almost all business men who have had practical experience in economic facts say "Yes."

If demand were merely desire there might be no overproduction. Demand, however, to result in buying requires the ability to pay as well as the desire to have. Those in distress today have plenty of desire but inadequate ability to buy. Consequently, the effective demand does not equal the available supply.

The conventional economists assume that in the distribution of wealth consumers as such get a share adequate to allow them to buy that part of the output of goods which is not *needed* for capital equipment. It would be closer to the facts to say that a certain portion of our current production of wealth goes to consumers as such to maintain the buying power for consumption goods, and that the rest is set aside as savings, surplus or capital and is invested in capital values of one kind or another. Theoretically the division between these two may be on the basis of the balance of requirements for immediate use and long-run capital requirements over many bumps and depressions, but economic forces move slowly and painfully like the proverbial molasses in January. Depressions cause capital values to tumble like houses built of cards. Currently no one knows what part of national income goes into savings and what is available for current consumption. No one, moreover, knows what part needs to be set aside to maintain an adequate, but not undue, supply of capital facilities to provide for a healthy and stable expansion of business. We are on an entirely hit-and-miss basis for this most vitally important phase of our economic life.

It seems quite natural, in spite of the classical economists, to anticipate, if an undue proportion of our stream of production is diverted to savings and capital facilities and too little to the purchasing ability for consumption goods, that we should have serious widespread business depression now and then, or whenever there is a general feeling that the production of capital facilities has gone too far. In such crises that part of our productive machine equipped to produce still more capital surplus becomes idle; men become unemployed, and even the demand for consumption goods falls. Even in good times, under such conditions, the production and sale of consumption goods would be too small for the best interests of both consumers and producers.

In such circumstances we could very easily have overproduction; real overproduction of capital facilities and potential overproduction of consumer goods in the light of purchasing ability.

A generation or two ago an undue proportion of savings out of our national income may have been impossible. We may have had occasional overbuilding of certain essential facilities from time to time, but in the long run we had to depend partially upon foreign capital to build up our economic machine. It was only in the first decade of this century that the tide commenced to turn and we were able to save enough to maintain and expand our own capital facilities. The War stimulated greater production and thrift. We loaned to other nations on a grand scale. After the war we loaned again on a grand scale for reconstruction. We still wish to produce for foreign investment, but the competition from other foreign nations is severe and a large portion of the world is able now to maintain and expand its own capital facilities and wishes to export its savings for investment. We must now face heavy imports as interest payments upon our foreign loans.

At one time personal and national thrift was a great and glorious virtue. Today a certain amount of personal thrift is necessary for personal financial security. National thrift adequate to maintaining reasonable capital needs is and will be necessary.

We shall still have economic growth and the need for large savings. Our population is growing, even though not at its former rate. Our per capita production is growing and our desires are evidently great enough to require a very decided increase in consumer goods, provided we maintain a safe balance between that part of the national income set aside for savings or investment, and current consumption. We must give consumer demand a chance to grow to its optimum.

What should be the balance between savings and use? No one knows. What has it been during this last decade? Again no one knows. We can see that possibly savings and capital expenditures have gone ahead, in a geometric ratio, of the sale of consumer goods, and that the foreign situation is such that there is no opportunity for a rapidly expanding foreign investment.

The present very generally conceded situation of overcapacity in industry or oversupply of capital goods; the recent orgy of investors bidding against each other on Wall Street and elsewhere for a chance to put their money or credit into stock or other certificates of ownership and investment, and the failure of the consumer market to keep up with the pace, look as though an unsafe share of our national income had been devoted to investment or savings. And the valuation of such savings has been drastically scaled down in the past eighteen months. On the other hand, to the extent that there has been truth in the talk of "profitless prosperity," the charge of a lack of balance in that direction is doubtful.

Thus the problem of overcapacity of productive equipment reduces itself to a problem of savings and investment of surplus; a problem of the distribution of our national income between savings for increase of capital facilities and the funds available through wages or dividends for the current consumption of goods and services by the masses of our citizens.

We should know the real facts about this situation and base our programs for the future on knowledge of present-day facts rather than on ideals based on past situations, or even on present ideals of what we should like to produce or what profits we should like to re-invest.

What of the problem of employment? Probably no one today denies the presence of unemployment. Aside from the problem of temporary alleviation of this situation, the question is whether or not unemployment is merely a result of a cyclical depression and will automatically disappear when business recovers, or whether it is more permanent.

Is our unemployment merely an effect of depression, or is it more deep-seated and actually one serious cause of depression? Some serious thinkers saw unemployment marching upon us before the depression appeared and believe that only fundamental economic changes can banish it in the future.

If we concede the possibility of unbalance in the distribution of national income between current spendings and savings, we can see how unemployment may result from lack of adequate popular spending power which means that many serious wants remain unsatisfied. Such a situation might be aggravated over a considerable era through a widespread application of those mass-production methods and labor-saving devices which are at times so helpful when applied to an individual industry. Mass-production and labor-saving devices have been so successful in some types of factory production that we may have overpopularized their application in various directions. There is very grave reason to doubt if their application to merchandising has been particularly sound, or is it certain even that it is warranted in all phases of factory production. Fortunately, plans to force it into agriculture have not gone far.

Mass-production and labor-saving devices have, however, been applied very successfully in many fields. There will be a tendency in the next year or so to force the application still further in order to pull various industries out of depression. Is such a program desirable from the standpoint of the stability of industry as a whole? Will it not tend toward the perpetuation of unemployment with a consequent lowering of the public purchasing power?

The answer cannot be a simple "Yes" or "No." On the one hand, we must face the fact that continued progress demands still greater efficiency and economy in production. On the other hand, there is no saving from the standpoint of industry as a whole unless the purchasing power of the masses is maintained. Superficially we have a dilemma.

The dilemma is only superficial. We may eat our pie of labor-saving and have it too if we can preserve abundant remunerative employment for the masses, or otherwise maintain their spending power and give them wholesome activities with which to occupy their leisure.

In no case is it well for industry as a whole that labor should be saved, unless it is saved for something useful. Too much of our thought has been spent on the mere saving of labor. With abundant wants, is our economic thinking so sterile that it cannot find ways to make this labor saved useful? It is on this latter phase of the matter that the thought of business planners must be focused for the next few years.

Shorter working hours and higher rates of wages are urged as means of solving the difficulty, with the idea that more people will be employed. Aside from the practical difficulty of applying such a program just now, we should face the problem of this saved time of the individual. How will he spend his leisure? Will he compete with other labor one day a week, or engage in some absorbing and socially wholesome recreation? In the long run shorter hours and higher wages will undoubtedly develop and help to solve this problem.

New industries are sought by some thinkers to absorb labor saved by old ones. If the new ones are of types which make their products largely by machine on mass methods, it is difficult to see how there will be anything but temporary help leading soon to still greater troubles. Fortunately, there is a chance to develop industries which are not of this type.

What we need here again is balance. On the one hand we have industries that economically do and should conduct themselves on the basis of mass-production and increased use of labor-saving devices. On the other hand we have industries and services in which the skilled human element in production predominates and mass-production methods and labor saving do not apply economically. We need balance between these different types of activity.

Fortunately, those industries in which the skilled human element predominates naturally produce articles and services of a semi-luxury nature which can most readily be marketed to those people whose profits come from mass production. Of such nature is almost the entire output of some communities, such as Old Deerfield in Massachusetts. Such luxury industries are only the extreme contrasts to, or balance for, mass production. In between we have many industries where mass production has varying degrees of applicability. In many of these labor saving has been pushed unduly because it is a general fad. In such times as these we should know where labor saving is not a true saving, and in such instances, as scientific business planners we should do our utmost to discourage its application.

How much better it would be if we knew more about the true economic applicability of mass-production methods to various industries and branches of commerce, and if we knew those industries which if stimulated would offer greater outlets for profitable employment of saved labor. Perchance real facts would provide the basis for abandoning the fad of labor saving in many lines of effort. If so, much would be done toward the re-establishment of industrial balance and stability.

There are many luxury and near-luxury industries and services where the element of skilled and semi-skilled human employment is most important. As business thinkers our attention has not been fixed on them. We hardly consider them. We have difficulty in envisioning and describing them. We should consider them and encourage them for the sake of general business balance and stability.

We must add to our thought of labor saving the thought of labor utilization. If industry applied its labor saving because of a broader demand for labor instead of a mere desire to save in labor costs, the result would help the business man even more than the laborer. If our business research could tell how to turn the scale so that labor rather than employment was at a premium, the increased purchasing power of the masses would create a much higher degree of business stability and prosperity.

Has our business research facts enough and of the right kind to bring about such a result? Probably not yet. But we need them most vitally.

Perhaps the greatest need for newer and better facts and more of them is in the field of the distribution of goods. We know all too little of this field, but serious steps are now being taken to fill this need. The Census of Distribution and many other pieces of research work, both public and private, are creating a vast new fund of useful information which will help the business world toward stability and will, undoubtedly, serve as a basis for much fruitful planning on the scale of whole industries, and even on a nationwide scale.

To secure business stability we should have an economically balanced situation between savings for capital and funds available to maintain current consumption. We should also have a balance between labor saving and labor utilization. And we must have more efficient systems for the distribution of goods. We have started to acquire knowledge on the latter, but lack even the basic facts with which to attack the other two problems. We must first get the facts. We must then somehow organize our individualistic society so that we can utilize a knowledge of the facts for effective planning of our economic life without incurring the danger of socialistic experiments, or what would be about as bad, bureaucracy or even a group of business czars.

In conclusion let me suggest that planning on the scale of any single industry needs to have as its basis a greater stability based upon a better balance in our whole economic life. To accomplish such balanced stability we need more facts with a broader basis of analysis. Facts on the scale of a single industry are inadequate. Planning and research on the scale of a single industry are inadequate. We need highly organized business research on the broadest possible basis, both public and private. We need planning and application of the results of research in a highly integrated, but non-socialistic and non-bureaucratic system. There is no call for unemployment for true business planners today.

THE limitation of production, whether in the raw-material or fabrication stage, seems to be a necessity for the health of an industry or trade. Its menace is no longer feared as a means of creating a shortage or of increasing prices, because the economic penalties of a misguided or extreme policy are even greater than are signified by existing legal restraints. These economic penalties, especially of subsequent overproduction or of the encouragement of substitutes or of the loss of consumer good-will, are unfortunately too often delayed so long as to give unscrupulous or unintelligent producers an opportunity temporarily or individually to gain at the expense of the permanent soundness of industry. The hopeful phase of the situation is that such conditions arise more probably as the result of a lack of intelligence rather than from the baser motives. Hence there is an opportunity for the trade intelligently to handle the situation. (Carl F. Taeusch, *Policy and Ethics in Business,* McGraw-Hill Book Company, Inc., pages 549-50.)

Cost Accounting and Budget Making[1]

The Place of the Cost Accountant in All Phases of Budget Making for Manufacturing Operations

By FLOYD F. HOVEY
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THE subject of our discussion this afternoon is to be the relation of cost accounting to budget making. Since my experience is limited to manufacturing industries, I will limit my remarks to apply to such industries. In order to clarify our thoughts on the subject, it might be well to consider what a budget is and what its place is in the organization of American business. The dictionary tells us that a budget is "a statement of probable revenue and expenditure and of financial proposals for the ensuing year." A more complete definition of manufacturing budgets is stated in the foreword of a recent publication of the Policyholders Service Bureau of the Metropolitan Life Insurance Company, entitled "Budgeting Manufacturing Operations": "A budget system has been defined as a systematic method of gathering information from the past and present, and of formulating plans for the future on this basis, and of reporting subsequently how these plans have been carried out. The application and use of this method of planning and recording give what is called budgetary control."

It will be noted from these definitions that there are two phases of budgetary control: (1) the preparation of estimated figures and plans for the operation of a business for a future period; and (2) the subsequent checking up on these figures by a comparison of actual with budgeted figures during the period for which the budget applies. We shall discuss the place of the cost accountant in each of these two phases of budgetary control.

What is the scope of budgetary control in a modern business? An examination of the literature on the subject will show that the budget in the modern business pervades the entire organization. Obviously, if we cover the entire field of revenue and expenditures in a modern business, we have completely covered the entire organization. A comprehensive budget will include a sales estimate. From this will be derived a production estimate, a balance-of-stores estimate, and a finished-goods-inventory estimate. On the expense side of the budget we shall have administrative expense, selling expense, factory overhead, material budgets, labor budgets and a budget for capital expenditures. All of these budgets will be combined into the financial budget. From this we shall get a statement of estimated cash receipts and estimated cash expenditures; also, an estimated balance sheet and estimated profit and loss statement. A much more complete classification of budgetary control may be found in any of the books on the subject. In this connection I might mention specifically the book "Budgetary Control" by James O. McKinsey of the University of Chicago.

It can be seen from this summary of the scope of a complete manufacturing budget that its activities involve the whole organization. In some cases, it has been found desirable to put budget making in the hands of a committee representing the various phases of the organization. In some cases, this committee is composed of staff men and, in other cases, it is composed of the line executives at the head of the various divisions of the business. Whether this committee is taken from the staff or the line, it should represent all departments of the business and should carry with it the authority and recognition of the executive head of the business. Oftentimes budget committees are headed by the president himself, usually assisted by staff members to take charge of the routine of budgetary control. However it is done in the individual case, in order to have a successful budgetary control, those in charge must have the sanction and backing of the executive head of the business.

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[1] Paper presented before a meeting of the Taylor Society, Philadelphia, Pa., May 1, 1931.

What is the place of the cost accountant in the organization in reference to budgetary control? If we consult the older literature on the subject, we shall find that early authors usually stated that the accounting department possessed the best source of information to use as a basis of budgetary control, but that too frequently accounting departments made their reports too late to be of material assistance to the budget committee. With the recent advances in cost-accounting procedure and the increasing importance of the office of comptroller in American business organizations, we find that the cost accountant is being recognized as the person most capable of furnishing the budget committee with the necessary information concerning past and current performance to make it possible for them to carry on their work effectively. Frequently we find accounting departments playing the leading parts on budget committees, especially where the budget is in the hands of a comptroller acting as staff assistant to the president of the corporation. In such instances, if the comptroller can co-ordinate the activities of other departments and express the results clearly and promptly through the accounting department's reports, much can be accomplished to further the aims of the budget committee.

Let us now consider the relation of the cost accountant to the first phase of budgetary control, namely, the gathering of information from the present and past records for the formulation of the plans for the future. We are dependent upon the sales budget for the source of future revenue. Therefore, it is on the expenditure side of the budget problem that the cost accountant is of most value in supplying information for formulating the budget. It is necessary to go to the past cost records of the company in order to find a sound basis for predicting costs in the future. It may be possible, or even advisable, to obtain material and direct-labor cost from other sources, especially where specification and standard departments are well developed or changes are in progress; but for an analysis of the manufacturing expense, it is almost necessary to depend upon the cost accountant as the source of information. If I may quote again from the Metropolitan Life Insurance Company's recent publication, on page 20 of this pamphlet we find fifty-five items of general factory expense listed with the source of information for these items. We find that the Cost Department is given as the source of information either entirely or in part for forty-six out of the fifty-five items. I believe that this is a fair statement of the relationship of the cost accountant to the budgetary program in the matter of expenditures for factory expense. In many concerns that do not have complete standardization of direct labor and complete standard specifications for materials it is probable that the cost department can furnish as good information, if not better, on the subject of direct-labor and direct-material cost as any other source. It is evident, then, that the accountant has a wealth of information. What should he do with it to make it most useful? The first thing to do with a mass of information is to classify it.

The cost accountant can be of material aid in the budgetary program by making a clear classification of his accounts. This classification should follow the organization of the business. Some one person in the organization should be responsible for the control of each account. There should be a clear definition of each account so that its content is perfectly understandable and the responsibility for the expenditure fixed ahead of time. The person responsible will then either make the budget for this item or will approve the amount set up by someone else. Such a clear and complete classification of accounts that will define individual responsibility for expenditure will, of course, involve long study and many tedious days of hard work on the part of the factory accountants. But it will be worth it. It will mean that every statement of expenditure which leaves the office thereafter will be of major interest to someone in the organization because it will show the amount of expenditure for which he is directly responsible.

Every business activity is subject to fluctuation in volume. Some have pronounced seasonal variations; most businesses show a gradual long-time trend upward or downward; and nearly all are influenced by the business cycle. Budgets should be so set up that they may be easily adjusted to current changes in volume. To assist in these adjustments, the cost accountant should differentiate in his accounts between fixed and variable items of expenditure.

Some items of cost are fixed regardless of production. Items such as taxes, rent and depreciation fall into this class. Other items vary directly with production, such as materials and direct labor. The accounts should differentiate between these elements of cost so that a budget flexible enough to apply to any production can be arrived at.

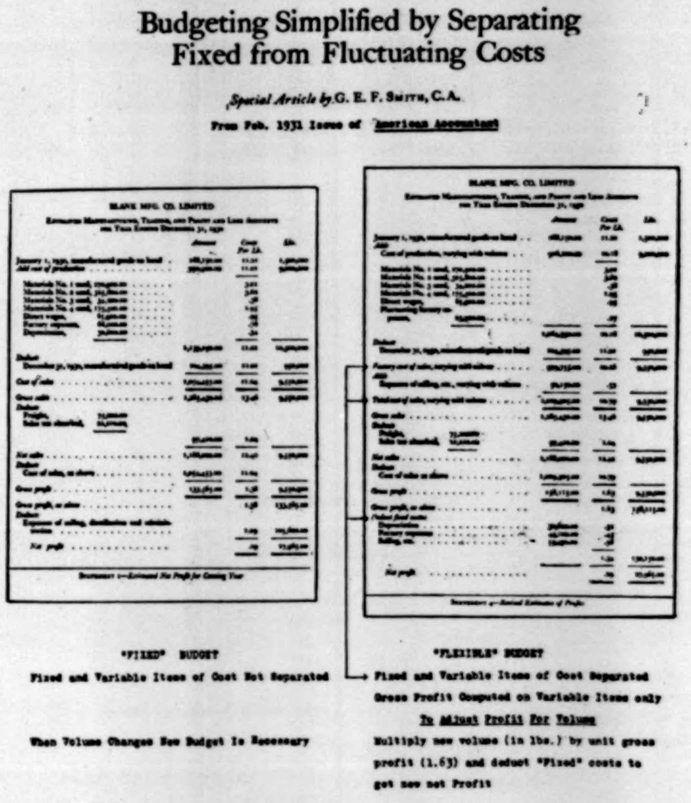
With the accounts properly classified into fixed and variable items, the cost accountant should then set up variable standard costs for fluctuating production. These costs will then determine the amount of the budgeted expenditures as soon as the budgeted output is known.

At the end of each accounting period the actual expenditures for the period should be compared with these budgeted figures *corrected for the volume of business actually done.* A statement may then be issued which will show the actual net profit compared to the budgeted net profit and will allocate the variances to their true cause. Change in volume of business will be charged or credited with its proper share of the variance and variance in efficiency will be charged or credited with its just amount without the complicating factor of volume variances.

There are many types of technique for the separation of fixed and variable items and the representation of these facts to management. It is almost impossible to pick up a current periodical on modern business management without finding an article devoted to someone's pet scheme for showing these facts to his management. There is not time enough now to go into these various techniques thoroughly. We have, however, a display which shows several different ways of accomplishing this purpose.

I should like to describe several of these illustrations which are somewhat unusual in the things they show.

1. *Gross Profit Computed on Variable Expenses Only.* A rather unique solution of this problem is presented in an article in the February, 1931, issue of the *American Accountant,* by G. E. F. Smith, C.A. Mr. Smith computes his gross profit from variable expenses only and then deducts all fixed expenses to get net profit. His gross profit per unit is constant regardless of production. This arrangement makes it possible to reconstruct the budget easily for any volume of business. A copy of one of Mr. Smith's illustrations is shown in Figure 1.



Budgeting Simplified by Separating Fixed from Fluctuating Costs

Special Article by G. E. F. Smith, C.A.

From Feb. 1931 Issue of "American Accountant"

BLANK MFG. CO. LIMITED

BLANK MFG. CO. LIMITED

"FIXED" BUDGET

Fixed and Variable Items of Cost Not Separated

When Volume Changes New Budget Is Necessary

"FLEXIBLE" BUDGET

Fixed and Variable Items of Cost Separated

Gross Profit Computed on Variable Items only

To Adjust Profit For Volume

Multiply new volume (in lbs.) by unit gross profit (1.63) and deduct "Fixed" costs to get new net Profit

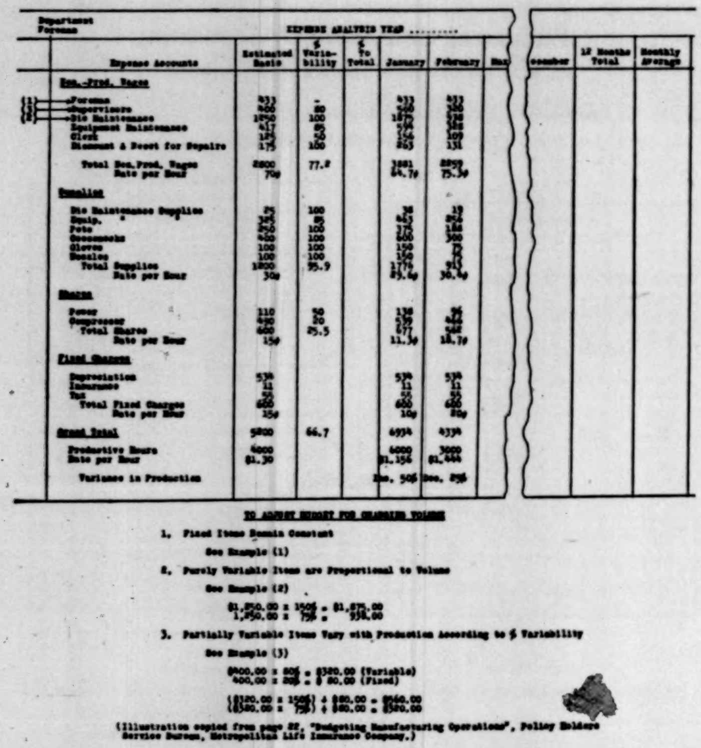
Figure 1

Reproduced by permission of the *American Accountant* and Mr. Smith

2. *Degree of Variability.* Another method of setting up variable budgets is to determine the degree or percentage of variability of each item without separating the fixed and variable elements within it. The amount may then be adjusted for varying volume in proportion to its per cent of variability. An illustration of this method is given on page 22 of the above mentioned publication of the Metropolitan Life Insurance Company. A copy of this illustration is shown in Figure 2.

3. *Simple Arithmetic Charts.* The variation in total cost for an item or groups of items may be shown in reference to variable production by means of a simple arithmetic chart. We have an example of this method taken from a practical case shown in Figure 3.

This firm makes its factory-expense budget relative to the standard, direct-labor cost of an estimated schedule of output. The standard labor cost is determined by their wage payment plan and direct labor is interpreted to include only labor on standardized jobs. The total manufacturing budget is equal to the sum of this direct labor expense, as indicated by the chart, and material at current prices.



Department
Foreman

EXPENSE ANALYSIS YEAR ....

	Expense Accounts	Estimated Basis	% Variability	% To Total	January	February	Mar	ecember	12 Months Total	Monthly Average
	Non.-Prod. Wages									
(1)	Foreman	433	-		433	433				
(3)	Supervisors	400	80		560	320				
(2)	Die Maintenance	1250	100		1875	938				
	Equipment Maintenance	417	85		594	328				
	Clerk	125	50		156	109				
	Dismount & Reset for Repairs	175	100		263	131				
	Total Non.Prod. Wages	2800	77.2		3881	2259				
	Rate per Hour	70¢			64.7¢	75.3¢				
	Supplies									
	Die Maintenance Supplies	25	100		38	19				
	Equip. " "	325	85		463	256				
	Pots	250	100		375	188				
	Goosenecks	400	100		600	300				
	Gloves	100	100		150	75				
	Nozzles	100	100		150	75				
	Total Supplies	1200	95.9		1776	913				
	Rate per Hour	30¢			29.6¢	30.4¢				
	Shares									
	Power	110	50		138	96				
	Compressor	490	20		539	466				
	Total Shares	600	25.5		677	562				
	Rate per Hour	15¢			11.3¢	18.7¢				
	Fixed Charges									
	Depreciation	534			534	534				
	Insurance	11			11	11				
	Tax	55			55	55				
	Total Fixed Charges	600			600	600				
	Rate per Hour	15¢			10¢	20¢				
	Grand Total	5200	66.7		6934	4334				
	Productive Hours	4000			6000	3000				
	Rate per Hour	$1.30			$1.156	$1.444				
	Variance in Production				Inc. 50%	Dec. 25%				

TO ADJUST BUDGET FOR CHANGING VOLUME

1. Fixed Items Remain Constant
See Example (1)
2. Purely Variable Items are Proportional to Volume
See Example (2)
$1,250.00 x 150% = $1,875.00
1,250.00 x 75% = 938.00
3. Partially Variable Items Vary with Production According to % Variability
See Example (3)
$400.00 x 80% = $320.00 (Variable)
400.00 x 20% = $ 80.00 (Fixed)
($320.00 x 150%) + $80.00 = $560.00
($320.00 x 75%) + $80.00 = $320.00

(Illustration copied from page 22, "Budgeting Manufacturing Operations", Policy Holders Service Bureau, Metropolitan Life Insurance Company.)

Figure 2

Reproduced by permission of the Metropolitan Life Insurance Company

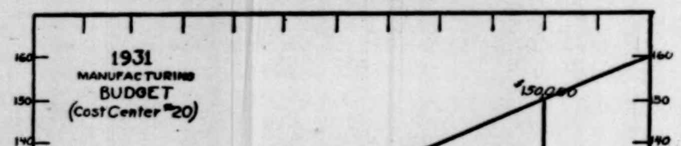


Figure 3

4. *Knoeppel Profitgraph.* I do not need to tell you about this example. It has been thoroughly discussed by Mr. Knoeppel himself in *Factory and Industrial Management* and has received wide publicity since. We have his original chart illustrated in Figure 4. This is an application of the cross-over chart to the problem of fixed and variable costs with volume of sales.

5. *Hyperbolic Unit-Cost Charts.* Sometimes it is better to show variation in terms of unit costs. This can be done conveniently by the use of semi-hyperbolic costing paper. (Figure 5.)

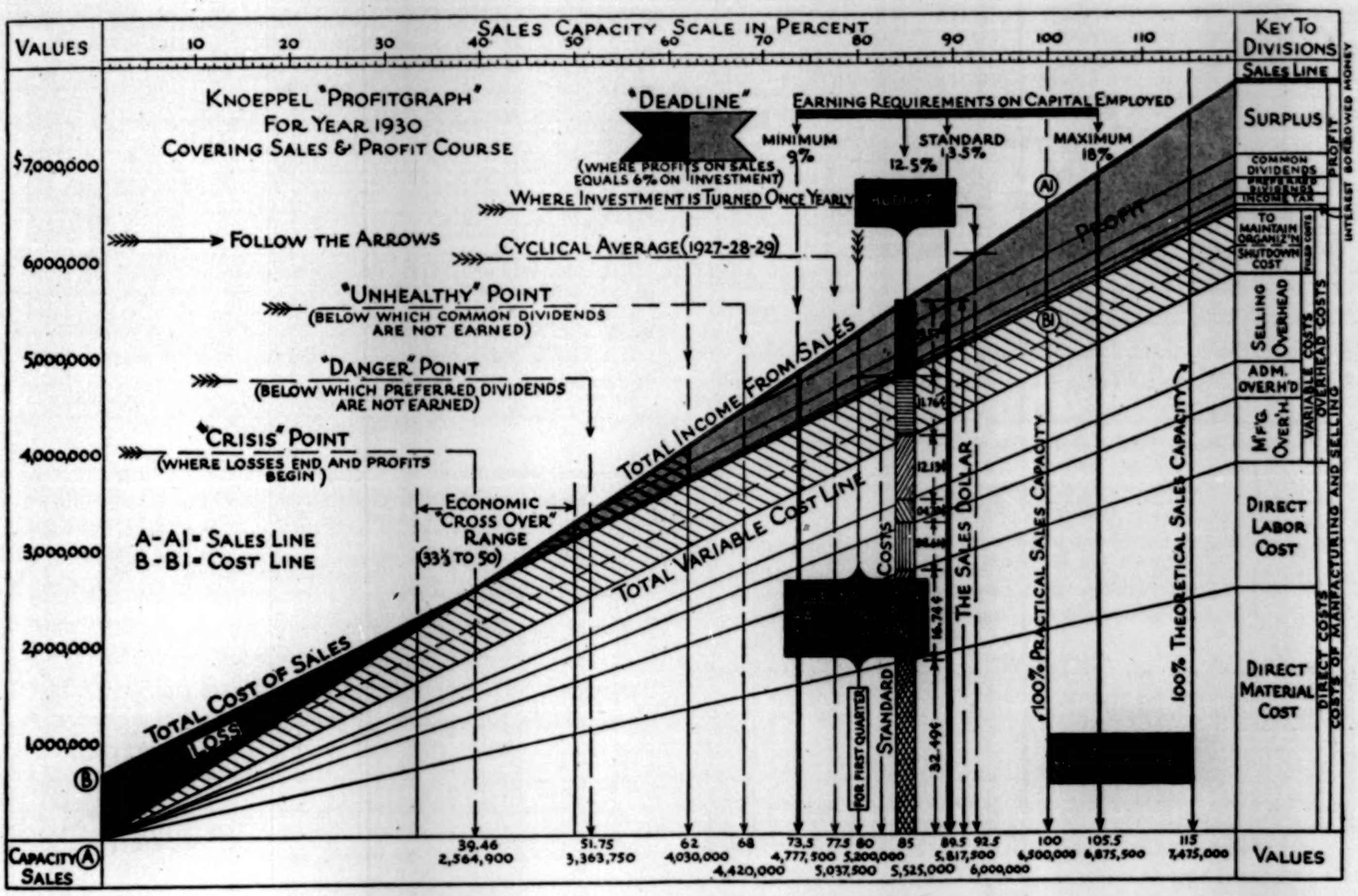
The horizontal scale is so ruled that by bisecting the distance from any point to the extreme right of the paper, the location of the point of twice that value will be obtained. Thus the distance (A) from 10 to 20 is equal to the distance (A′) from 20 to the right edge of the sheet, and similarly the distance (B) from 25 to 50 is equal to the distance (B′) from 50 to the right hand edge of the sheet. Therefore, if this process of bisecting is repeated indefinitely, we would approach but never reach the right edge. Therefore, that point may be labeled infinity. The vertical scale of this paper is a simple arithmetic scale, as the illustration will show.

Now, if cost figures for varying production are plotted on this paper with cost on the vertical or arithmetic scale and production on the horizontal or hyperbolic scale, the result will be a straight line. This will be true regardless of the nature of the item, as will be brought out presently.

It is not necessary to use specially ruled paper, however, as is shown by the lower part of Figure 8. The same result may be accomplished by plotting the cost per unit with the reciprocal of the production on a reversed arithmetiic scale. For example, the point (30) on the hyperbolic scale is the same as its reciprocal (.033) plotted on the reciprocal scale.

Simple examples of the application of this idea are found in Figures 6, 7 and 8. Figure 6 shows the curve for a fixed charge plotted on an arithmetic scale in the chart above and on a hyperbolic scale in the chart below. In this case, the result on the hyperbolic scale is a straight line passing through the unit cost for the production indicated on the extreme left and zero at the extreme right; since, if production is increased indefinitely, the unit cost for an item of fixed charge will approach zero.

To accompany the article "Plotting the Profit Course" (Page 826).



FACTORY and INDUSTRIAL MANAGEMENT for APRIL 1930 PAGES 827 to 830, inclusive

Figure 4
Reproduced by permission of the McGraw-Hill Publishing Company and Mr. Knoeppel

In Figure 7 we have the other extreme case; namely, that of an item which varies directly with production. In this case, the unit cost will be the same regardless of production and will be represented by a straight horizontal line on either ruling.

Figure 8 shows the comparison for an item that is partly variable and partly fixed. This type of item gives a straight line which crosses the right edge of the sheet at a point which represents the cost for the variable item alone, the fixed portion of the item having been reduced to zero by indefinitely increasing production of the goods in question.

It can be seen from the above that any item or combination of items of cost will result in a straight line if plotted against production on hyperbolic paper. The greater the percentage of fixed items, the steeper will be the slope of the line. One point, however, must be borne in mind. The curve will have significance only up to the capacity of the equipment upon which it is based.

These examples that I have mentioned serve to indicate the great variety of procedures that may be used to present the accounts of a company in convenient form for budgeting. I believe, however, that those accountants who have resorted to graphical representation of the relationship between revenue and expenditures for different volumes of business are more successful in showing management the exact effect on the profit and loss statement of variations in volume of business and how to combat some of the troubles due to this cause. The method to use in illustrating this phenomenon, of course, will depend upon the particular problem involved, and no general rules can be laid down as to the best way for doing this.

Let us now pass to the second phase of budgetary control, namely, the reporting periodically of the relationship between the budgeted expenditures and the actual cost. If we examine the early literature on this subject, we find that most of the

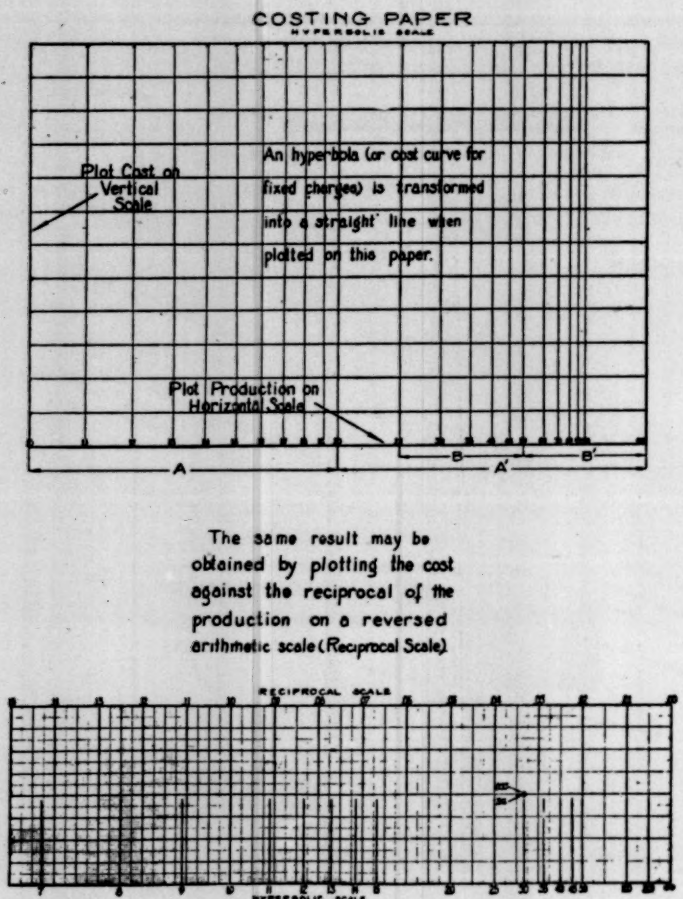


Figure 5

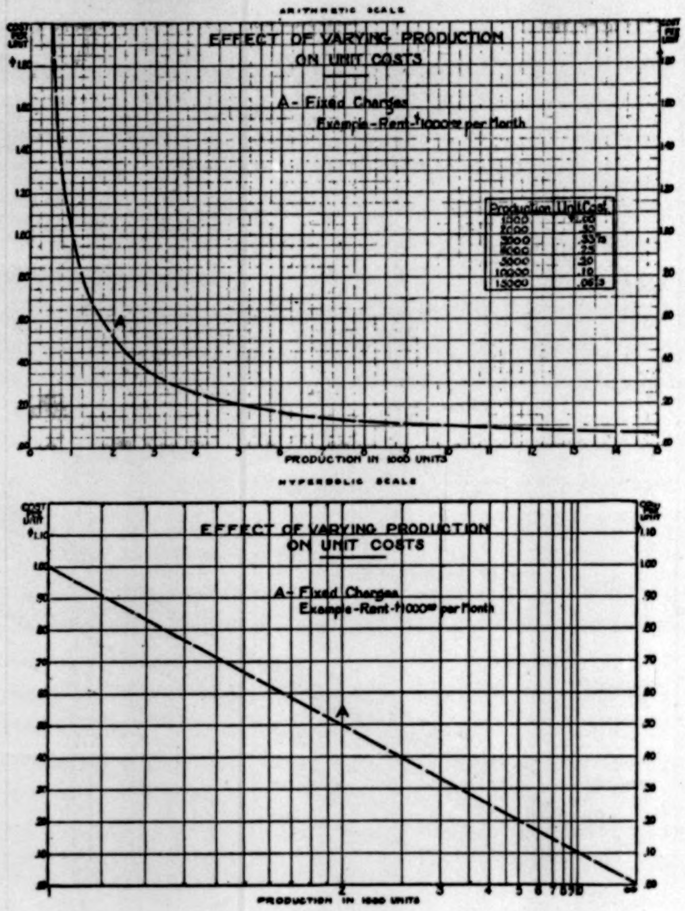


Figure 6

advocates of budgetary control stated that the accounting department was best equipped to give the facts as to the relationship between actual and budgeted expenditures. However, most of these writers stated that the reports of the cost department were too slow to be of any use and it was ordinarily recommended that the budget committee obtain their information from other sources. However, we shall find in the more recent literature on budgets that the accounting department is playing a predominant part in the reporting of performance as measured by budgets. This change of attitude is due to the improved methods used by modern factory accountants.

With the development of standard costs and the utilization of the exception method of accounting, it is possible for costs to be arrived at much more quickly than formerly. When such standards are used, the regular operations are grouped and costed almost automatically. It is only necessary to give attention to the exceptions to the rule. Such exceptions usually give rise to entries in variance accounts and show up on the periodic statements as variances from the budget. Such methods require much less clerical work than former methods and consequently statements may be issued much more promptly than formerly.

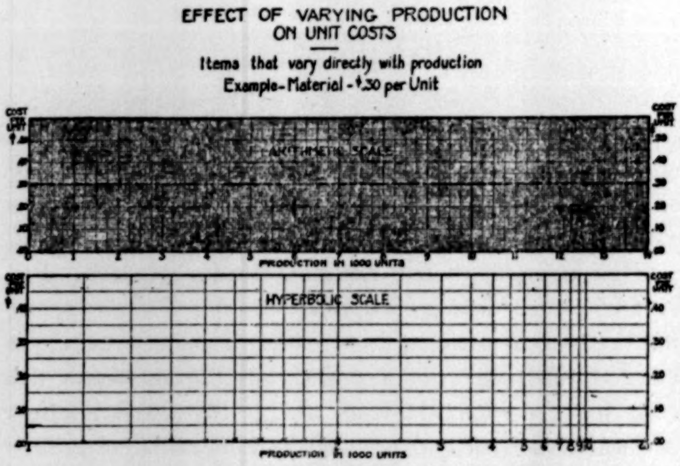
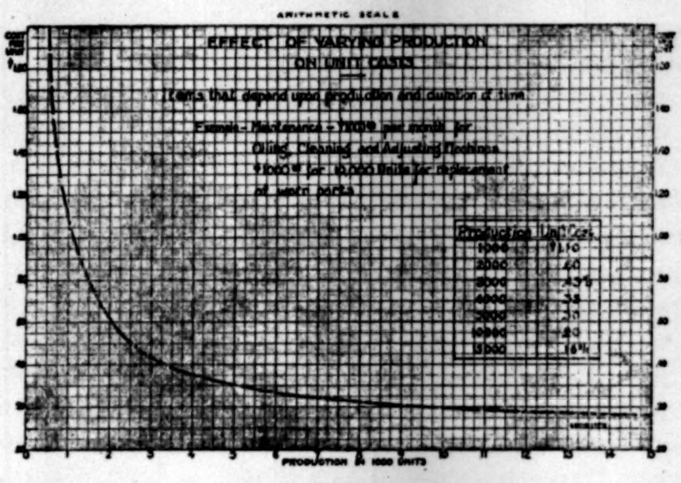


Figure 7

Besides improved accounting technique, modern offices are equipped with many mechanical devices



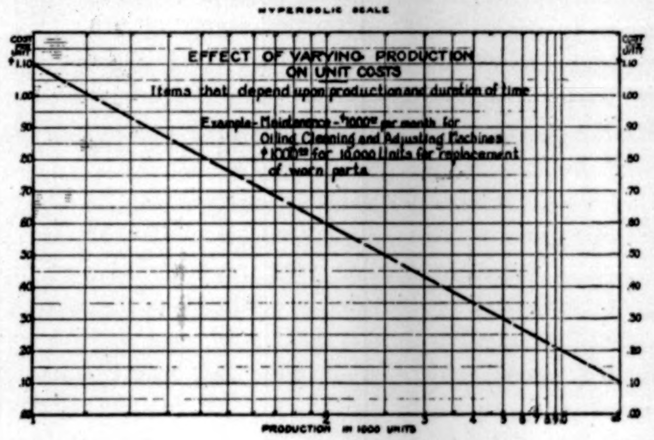


Figure 8

which make it possible for the accountant to make more prompt reports on past performance.

The common practice is to issue periodic reports which show the actual cost, standard cost and the variance, together with such explanation for these variances as is necessary. Here, again, there are many types of techniques and usually the technique is governed by the methods employed in making the budget in the first place. I wish to refer again to our exhibit on which we have tried to show some of the ways in which modern businesses have been showing the actual and standard costs or the budgeted expenses with the actual expenses and variances to date.

In these few minutes, I have tried to point out that the cost accountant has a very real role to play in the program of budgetary control in American business. In the present era of keen competition, we find that our progressive accountants have risen to the occasion. We find more and more coordination between accounting departments, standards departments, planning departments, and budget committees. Such co-ordination results in useful interchange of information and viewpoints. This results in unified action and the development, on the part of all departments, of methods that can be co-ordinated into thorough-going systems of budgetary control of revenue and expenditures. In the accountant's literature we find more and more reference to budgetary control and discussion of how it may be best carried on. These are all steps in the right direction and I wish to appeal to the accountnig profession, now, for a continuance of this effort in order that the future common practices of factory accounting may provide for full and complete systems of budgetary control.

Discussion

John Balch.[2] In our opinion Mr. Hovey's second definition is one of the best on budgetary control. It is comprehensive and concise and goes to the heart of the question.

Mr. Hovey has covered the subject very ably from the point of view of a large manufacturing concern. There are, however, thousands of small concerns which are sadly in need of the help that budgetary control can give them. Many assume that the introduction of budgetary methods involves increased overhead costs which they hesitate to take on. This is a deeply rooted idea which needs to be disposed of. It is our experience that in almost every organization there is some individual who can go ahead with budgetary plans if he is given the proper direction and authority.

As Mr. Hovey says, however, it is absolutely necessary that the responsible head of a business be vitally interested in budget records. It seems paradoxical to suggest that the head of a business may not know all there is to know of his own business, but the average chief executive is blind to his own limitations. An outstanding example of the opposite is the successful Mr. Henry Ford, who has so ably supplemented his own ability with the advice of experts. We do not find many Fords in business today.

We must educate our executives. Once they realize the value of comparative records in reasonable detail, with fixed responsibility for results, they are usually glad to use their authority to install budgetary methods. It is not necessary to have a comptroller, an assistant to the president or a special budget officer. An assistant treasurer, a bookkeeper, a cost accountant or a senior clerk can be made responsible. It is indeed a lean organization which does not have some material that can be trained to take over the responsibility for a budget.

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[2] Certified Public Accountant, Balch, Funk & Company, Philadelphia. Paper presented by Mr. W. H. Funk.

Since the budget deals with figures it is primarily an accounting record. Personally, we do not hold with those who wish to subdivide accounting responsibility. We realize that this is necessary in huge organizations, but we are limiting our discussion to the average-sized business. In this class we are discussing the problems of thousands of men. Therefore we say that the budget is part of the department of accounts, part of the book- or record-keeping of the office, and we place the cost work in the same category. It has been our experience that someone with cost training who is sensitive to cost problems is generally able to do more valuable work in connection with the budget. We heartily agree with Mr. Hovey that the cost accountant, if one exists in an organization, is the proper one to do the major work on the budget. With the diminution of a large amount of the old-fashioned historical cost work, with its endless distributions and redistributions, the cost accountant is gradually learning to handle his work with celerity. He is overcoming his one-time reputation for delay; it is now actually unnecessary for reports to be delayed, as they too frequently have been.

Budget records are not necessarily intricate. In some cases they may be very simple but very valuable. The work of making periodic comparisons may therefore be done with the average office material. This is particularly true of jobbing and wholesale houses where the classification of accounts is not large nor the departments numerous. In one installation where a nationally advertised brand was being distributed over a wide territory, we found that much unnecessary work was being done in the office. A very comprehensive budget was put into operation under the direction of a bookkeeper and without the addition of a single clerk. The executives were amazed to find that their own organization, without working any harder or receiving any more pay, was able to give them information they had never thought it possible to obtain. Yet they had been in business more than twenty years.

Budgetary comparisons often point to interesting problems, the consideration of which pays for the work of comparison many times over. Last year we set up a budget for a manufacturer of five distinct lines, with some thirty or forty departments, operating in several different cities. The best minds of the offices and plants enabled us to set up a good budget. In spite of dull business the net profits at the end of the year exceeded expectations by approximately 5 per cent. In the opinion of the president one thing was responsible for this result. Every department head was on his toes because he had committed himself to a certain budget and was trying to beat it. The results or lack of them were brought to his attention each month. Here was a case of failure to realize the budgeted sales or income while the budgeted net profit was realized. It goes without saying that expenses were well below the budgeted figure.

This illustrates the wisdom of making the budget flexible and at the same time shows what can be done. The comptroller was responsible for this plan and had to handle it without additional expense because his department was on a budget also.

We agree with Mr. Hovey that there must be fixed responsibility with respect to the various items of the budget. We have not always found it wise to set up a separate account for each item or class of items. Certain charges, however, should always be grouped in such a way that some foreman or department head is responsible for results. Manifestly no charges for which that foreman or department head cannot be held responsible should be included.

It always seems the part of wisdom in installing work of this kind to make as few radical changes as possible. As long as basic principles are observed and no misinformation developed we believe that the way the result is obtained is quite secondary.

There is one very important part of budget preparation which we should like to emphasize in closing. There must be real co-operation with the actual department heads who are to be held responsible. Figures should be submitted for their criticism and suggestion *before* the final budget figures are set up. If this is not done the purpose of the budget will be nullified at the start; it can have no value unless used. This means periodic comparisons and conferences with those responsible for results. You must be sure that the theoretically responsible person is also the actually responsible person, and that he or she has fully accepted this responsibility, or you will not get the valuable results that your efforts warrant.

Arthur W. Marshall.[8] I feel impelled to supplement many of Mr. Hovey's remarks with which I am in hearty general agreement. I should like especially to carry on his appeal and have every representative here go out and start a budget in his particular firm, no matter whether the company is a large or a small one.

For example, if we start with the advertising department in either the large or the small firm, it is quite simple to classify expenses according to periodicals, cost of cuts, printing, etc., and to adhere to that classification. I have seen these expenses controlled and held within limits for years and years. After budgeting the advertising department suppose we move on to the capital expenditures budget in the manufacturing concern. It is very simple to hold these expenses within certain definite limits, and the same is true as to plant repairs and plant expenses. So we could go on from department to department. The keystone of these budgets, and the most difficult to set up, is the sales budget.

In small companies, however, there is little need for the setting up of so many budgets. The owners and those in charge know the details but do not always have them under control. Mr. Hovey's charts should be suggestive for these companies. It will only be necessary to set up a standard sales volume and break down the estimated costs into the various items of expense in the light of past experience. Labor will make up a certain percentage, raw materials another, and so on. The total plant expenses may equal about 60 per cent of the sales volume. If the expense of selling and administration makes up another 30 per cent of this sales-volume standard, we have a 10 per cent estimated profit.

The gain is that we know something a year in advance. We have a picture of our expectations. What is a forecast we intend to make a reality. A budget is something which we prepare to arrive eventually at actual profits.

Mr. Hovey said that the cost accountant's field is the classification of accounts. I should go a step farther. The classification of accounts in itself is not of much value; what we must do is to control the operations that represent these accounts. Our accounts must be so set up that they are practically standard. I am not now advocating standard costs but the use of standards in accounting. What do I mean by standards? A company has about four hundred tank cars moving all over the country and serving several different departments. In order to control this expense it is necessary to set up a unit rate. It may be so much service per gallon—whatever standard is decided upon. When it is set up and the actual items of expense and cost per gallon compared with it we have control over that account. If costs are over standard we make an investigation to find out why. The more you break down your accounts into individual operating units the more uniform are your accounts and the more easily handled and understood.

I would venture to say that less than one per cent of the concerns in this country use co-ordinated budgets. Yet we must come to the use of the co-ordinated budget.

There has been much discussion of control by the co-ordinated budget. You have all heard of the five-year budgetary plan, especially in the utility companies where services are more or less fixed and it is fairly easy to determine in advance what you expect to do. I personally am in favor of budgeting for a year in advance for the ordinary company and correcting the budget in accordance with actuality at definite periods. At the end of April we should have four months of actuality and eight months of estimate. As we move closer to the end of the year we should have closer control.

I should like to caution you about the use of charts. They usually have a fascination for one but there are few who know how to use them fully. Graphs of actual sales as compared with budgeted sales may have a valuable place in any organization but I take exception to any general use of charts instead of statements. Their use may be valuable in operations such as mines, where there is only one unit of production. Where there are different units, however, each carrying different percentages of profit, it might take a draftsman's complete time to draw the charts for each department and commodity. They may be used in particular cases but not in all.

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[8] Assistant Production Manager, General Asphalt Company, Philadelphia.

The important thing is the direction of performance and control under the budget. I have repeatedly heard it said that sales expectancy could not possibly be realized and yet under expert direction and the use of budgets the salesmen have more than realized their quotas.

Eugene Y. Allen.[4] In working out an operating budget for a manufacturing concern it is important that the man who has to meet that budget be kept informed of his costs. If the budget is on a monthly basis in an industry where labor and materials costs vary widely, I should like to ask Mr. Hovey how often he thinks the man should be advised of his costs. I know that it is fairly easy to report on sales from day to day, but costs are a different matter. In the railroads, for example, varying rates are paid for labor and preparation of daily costs might be very difficult.

Floyd F. Hovey. The more often information is made available and compared with budget figures the more desirable it is, of course. The companies I have mentioned prepare weekly statements of expense which give actual expenses in the form of percentages of the budget figures for direct labor, materials, etc. In this way the man responsible is acquainted with his own figures and immediately acts if they do not accord with the figures given in the budget.

The other day I received a letter from a Cleveland industrial engineer who was trying to set up a daily budget. He said his firm had a monthly budget which he did not find adequate to his purposes.

I know a large manufacturing company that sends to each of its executives a daily report of sales. This gives them an indication of the actual condition of the factory, shows the relationship of each department to the day's sales and has been found very valuable.

George M. Arisman.[5] It should be borne in mind that cost and price fixing are important elements in the economic application of budgets. Prices are fixed by the economics bearing on each individual in industry and on industry as a whole, and are therefore taken out of the realm of the control of individuals.

The cost of raw materials and the wages of labor are fixed because of the economics of today. Material utilization and labor efficiency may well be controlled and measured through standard costs, which are one part of budgets. Expense budgets, through proper analysis, application and control, may also be used advantageously in predetermining the costs of a product, or products, in order to attain a reasonable profit on the basis of the prices as fixed by competition or other elements in our economic situation.

A budget of expense to be practical should not only be used for controlling expense but should be a means of showing, through analysis and application, whether the planned burden of costs is excessive in relation to a fair margin of profit. If this analysis of expense in the budget shows an excessive or misapplied burden, then ways and means should be employed to reduce the excess burden per unit and principally the fixed burden. The variable burden will take care of itself under budgetary control, in the same manner as material and labor, which are variable and controlled by standard costs when these are known, are taken care of. Through the addition of product volume, by increasing sales of present products or adding new ones without increasing the fixed burden, unit costs will be lowered as well as fixed burden reduced as a result of expense budgets and their analysis. Thus the individual may be able to lower his costs on all commodities before operating in order to attain a volume sufficient to produce the desired margin of profit on the business as a whole or on each product individually.

Further, by this analysis of predetermined burden, he may be able to add to his line products which are not in themselves profitable. Because of the fact that he has economically absorbed his burden, however, they will enable him to make more profit on the business as a whole and on the employed capital, which will not have been greatly increased because fixed expenses were held constant.

In summarizing, through intelligent expense budgets set up according to fixed and variable expenses, it is possible to establish practical costs, which will allow a business to attain greater volume and thereby greater profits through decreased unit costs of its products.

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[4] Valuation Engineer, Reading Company, Philadelphia, Pa.

[5] Assistant Controller, Armstrong Cork Company, Lancaster, Pa.

George G. Berger.[*] In these days of dynamic business conditions the necessity for growing standards is quite obvious. The budget based on last year's cost of production is generally out of line with current sales policies. Many executives have, in fact, consigned the budget to a warm place and are going out for business on rule-of-thumb methods, hoping at the end of the year to show profits.

My scheme is to give the executive a sort of current budget by acquainting him with recent costs of production. Necessarily, an accounting technique is required in which (1) costs of production are accurate and therefore related to the single competitive line only; (2) cost data are promptly obtained, and (3) the profit and loss statement is prepared without delay.

I have been concerned with securing a weekly profit and loss statement, incorporating these requirements, for a stamping plant. The conditions were as follows:

1. Fifteen thousand items were manufactured, some for stock and others on job orders.
2. About one hundred different types of raw materials were used.
3. The orders per item ranged from one hundred to one hundred thousand.
4. The nature of the trade made the lines very competitive; price lists were continually being revised.

In setting up the profit and loss statement by the week for the main competitive line the following classifications of costs were noted:

1. Certain items. such as sales, credits, labor charges, dirt removal, etc., are as accurately obtainable for the weekly period as for any other period and there are advantages in securing weekly statements on certain items, such as labor charges. There is no need then for the thirteen-month calendar or any necessity for pro-rating labor charges when the last day of the month comes in the middle of the week. The volume of accounting work is also substantially reduced, and there is closer control over accounting conditions.
2. Certain items, such as wrapping-materials expense, depreciation, etc., which must be predetermined for the monthly statement, are as easily set up for the weekly statement.
3. Items such as telephone expense, power, etc., which are accurately obtainable after the period for the monthly statement, may be forecast with sufficient accuracy for the weekly period. In fact, it may simply be shown that any inaccuracy due to such forecasts does not seriously affect the net profit and the sales policy. At the end of the fiscal year these forecasts are replaced by the actual charges.

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[*] Industrial Engineer, New York, N. Y.

FOR its own purpose, therefore, industry has come to demand of operating departments more and better standards. An effective budget must start with reasonably accurate forecasts of the probable activity of business in general, of the particular business, and of the sales of the items which it produces—in as predetermined quantities and prices as is possible. It must then be built up with reasonably accurate forecasts of all production costs involving predetermined requirements and costs of materials, machines, tools, labor and overhead. This is one reason for the rapid and widespread increase of time study during the past decade, and for the development of such mechanisms as standard costs.

The experience of scientific management in general administration has brought out an important fact, . . . that the development of a technique of general administrative research, standardization and control indicates that there may be no limit to the manageable size of enterprises; that, if we learn our lessons of experience and develop our technique accordingly, probably whole industries and the grouped industries of national and international areas may be made subject to a manageable control. There are now in the United States and Europe consolidations of enterprises, diverse as to the nature of their products and geographically widely scattered, which are managed more effectively than even small enterprises were managed a decade ago. (H. S. Person, *Scientific Management as a Philosophy and Technique of Progressive Industrial Stabilization,* to be delivered before the International Industrial Relations Association Congress, Amsterdam.)

Driving Forces in the Sales Plan

Illustrating the Importance of Building a Sales Plan Around Some Central Driving Force

By STUART DuBOIS COWAN
President, Cowan & Dengler Incorporated, New York

MY FRIEND and neighbor, Fred Farrar, one of the world's most versatile raconteurs, told me this interesting story about Mr. Schwab.

A few years ago Mr. Schwab was called upon to discuss some portentous topic which had been assigned to him weeks in advance. In addressing his audience, he apologized as usual by saying that this was the first occasion when he had not presented a carefully prepared speech from the pen of his public relations counsel, and that in the absence of any such scholarly paper he was tempted to recite a personal experience in the development of overseas trade in which they might be interested.

He had long cherished the hope of obtaining large-volume business in China and had put one man after another at the task of analyzing the market and developing it, both in this country and over there, all at great expense. The net result of this extensive and costly effort had been practically negligible—not enough business to pay a fraction of the cost of the preliminary work.

Finally, when he and his wife were planning an extended vacation, he decided to include China in their itinerary. When he arrived on the scene, he found many aspects of the situation which interested him tremendously. He came in contact with man after man whom he wanted to know and talk with at length. He discovered a wide range of situations which excited his curiosity. Above all else, he was impressed by the very pressing needs which they did not know how to meet.

By getting to know these people, by studying their problems, and by offering concrete and practical suggestions, Mr. Schwab was able, without any highly organized effort, to accumulate contract after contract, aggregating $24,000,000.

Regardless of whether this anecdote is strictly accurate, it has its counterpart in the history of many businesses; it suggests that in every situation there are two ways of attacking a problem. One is the ostensibly thorough, methodical method—often somewhat unimaginative—which, when it fails, is usually found wanting in the human understanding of human needs. The second method is to apply a more or less creative and personal viewpoint, a combination of sympathetic analysis, active imagination, courage based on justifiable self-confidence and consistent human effort—a method which often brings volume and profit when the first method proves unproductive. Because of this it is difficult to set up a workable definition of planning for sales, though logically such a definition might be the first step in a paper before this Society.

Certainly the membership of the Taylor Society, which stands for truly scientific management in the handling of all vital forces in order of their real importance, may be more concerned with seemingly uncontrollable, intangible and illogical human elements that really determine profit opportunity, than in a score of tangible, measurable, semi-technical activities or functions which play a relatively minor part in the annual earnings of any industry or individual company. It was this viewpoint which suggested the phrase "driving forces" in the title of this paper.

However, a sincere effort was made to set up a workable definition of "planning for sales." Written opinions as to the scope of the subject were obtained from thirty-four leading sales executives. Their opinions were tabulated, analyzed and summarized. Then followed a conference with three of our leading sales consultants. But the entire effort accomplished practically nothing of interest to you. It seemed utterly hopeless to set up any definition of planning

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[1] Paper presented before a meeting of the Taylor Society, Philadelphia, Pa., April 30, 1931.

for sales that would satisfy different types of men in different companies which vary as to type, size, problems, plans and methods. Of the thirty-four written opinions no two agree; twelve different objectives, varying and overlapping, together with ninety-three different activities, were listed in these thirty-four reports. The discussion among three consultants, while less confusing, showed gaps at many important points. So it seemed logical to abandon further effort at the definition of "planning for sales," and to proceed with a simple statement of personal experience and observation covering examples of sound sales planning.

Analogy Between Power Plant and Sales Planning

If we were to use such words as "merchandising," "sales planning," "sales operation," "sales resistance," etc., probably each of those terms would have a different connotation for each person in this room. Therefore it may be an advantage to think in other terms, which mean precisely the same thing to all of us, to set up a rough analogy between a power plant and a sales plan.

The primary factors in a power plant are four: fuel mixture, combustion, mechanical motion, friction. And the first two—fuel mixture and combustion—provide the energy which drives the machinery. These two may therefore be considered as the driving forces that actually move something and provide power in usable form.

Corresponding to the fuel mixture, we have in sales planning (1) a fundamental human *want,* and (2) a basic conception or idea—some fundamental *inducement* — which will satisfy that want. We use the term "fuel mixture" because in a power plant air or oxygen and some hydrocarbon material represent latent power. So in selling, this primary driving force consists of the human want in relation to some means of serving or satisfying it. The word "inducement" must be interpreted in a broad way, to cover product, proposition, service or any combination which will win and hold customers.

Corresponding to combustion, we have the kindling of interest and desire to buy, the propagating of the facts about the inducement. This may be done through advertising or the work of the selling organization, through sales promotion, by demonstration or by any method which widely, quickly and economically disseminates the information of interest to present and prospective buyers.

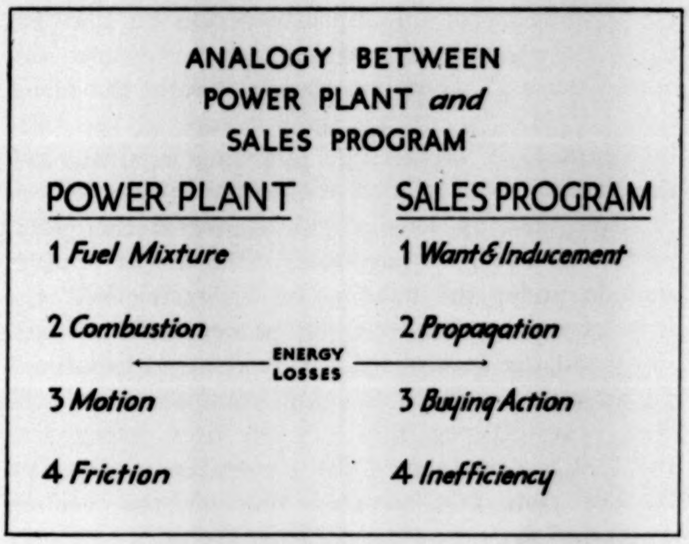

Figure 1

Corresponding to motion in a power plant, we have the actual purchasing by consumers, retailers, wholesalers, which results from all of the various forms of propagating the inducement.

Corresponding to friction in a power plant, we have in an organization all of the difficulties and lost motion which result from the fallibility and general cussedness of human nature.

The element of friction, interesting and important as it is, probably holds less interest for you than the all-important driving forces which, for the moment, are characterized as "fuel mixture" and "combustion."

Even so, friction might well be the subject of a leading paper in itself. Who has not had the most heart-breaking experiences as a result of friction in some part of sales-organization machinery? Only recently, the newly elected president of one of America's largest companies called our office on the telephone to invite us to discuss a merchandising and advertising program which might have meant to us a very substantial fee. A clerk told him that we were not available and gave no report of the call. Naturally he felt slighted, and when we happened to talk with him shortly afterward, said he was sorry to find that we were not sufficiently interested to call him back. Surely this is a memorable example of sales friction. No doubt each of you from your own experience could mention a long list of various types of friction which, taken together, have dissipated volume and profit amounting to a vast total — the incorrect or late filling of orders by the factory, mistakes in the credit department, intemperate action on the part of salesmen, the general human cussedness and carelessness of which we spoke. Surely the members of this Society are fully aware of the vital importance of foreseeing, guarding against, and minimizing sales friction within an organization.

There may be some slight danger at this point of talking at cross purposes. One might tend to include under the heading of "sales friction" the loss of energy between the process of "combustion" and the development of "mechanical motion." In an automobile motor, for example, it may be that only 30 per cent of the heat energy of the fuel is delivered to the transmission, and that 70 per cent is dissipated through the cooling water and the exhaust pipe. So in the sales program, it may be that 50 per cent of the fundamental energy of the program may be dissipated through the inefficiency of the retailer or the wholesaler, as the case may be. That *loss of energy,* however, is closely allied to the process of propagating the inducement and translating it into buying action—something quite different from problems described as "friction" which are within an organization and therefore more subject to effective control.

The element of the "motion" or action in a sales program, which parallels the mechanical movement in a power plant, is of course the most dramatic and interesting. Surely at a time like this, the spring of 1931, there is no greater satisfaction to an able management or sales executive than to watch his sales and profit curves hold even or turn upward. Direct personal observation of buying on the part of the public, retailers and wholesalers, and daily or weekly study of graphic and statistical evidence, provided by adequate systems of control, can give the sales executive whose hopes are being realized the thrill that Marc Connelly must have had on the opening night of "The Green Pastures," after tramping Broadway for months in the hope of finding a producer.

Now let us come to the driving forces that make possible high achievement in the field of marketing.

Since your interests are so varied, it is impossible to concentrate this paper on one or two examples and present them in their complete form, interesting as that might be. Even though the cases which follow are necessarily sketchy, there may be some advantage in covering a wide range of problems in different types of businesses, in presenting a broad panoramic view, all of which points to the absolute need of building a sales plan around some central driving force.

Examples of Driving Forces Behind Whole Industries

We have agreed for the moment that just as a fuel mixture consists of oxygen and a hydrocarbon material, so the fuel factor of sales consists of some deep-seated human want and some inducement which will persuade the public to spend money to satisfy that want.

Presumably most women want to win a man or hold a man for their very own, often against his will. The cosmetic industry and the perfumery industry are based largely on this want. Likewise those industries which supply style apparel are founded on this desire. To be specific—there has been some confusion as to a woman's motive in beautifying and adorning her person. In the matter of apparel there has been much debate as to whether she thinks in terms of other women or in terms of men when she buys clothing or shoes. One of the smart chat writers once said that "women dress for other women but undress for men," which might mean that one motive is involved in the selection of dresses for daytime wear and a wholly different motive in the choice of evening dresses. Here we have a fundamental human drive back of industries that cause women to spend over four thousand millions of dollars a year.

This same want, sex attraction, manifests itself in another wholly different manner. Various concerns have persuaded women to spend millions on various methods of slenderizing their figures — a product, a diet, a method of exercise, a paraffin bath or some other appealing inducement.

Closely related to the human desire to attract the opposite sex is the desire for personal cleanliness, very active in some but latent in others, as shown by the fact that Listerine and Lifebuoy have found it necessary and profitable to dwell on this thought. To induce the public to spend millions to gratify this want, manufacturers have presented in a most compelling manner the advantages of soaps, shampoos, manicure specialties, deodorants and mouth-wash preparations.

The same basic human want manifests itself in the purchase of shoes; while protection and wearing quality are important, the number of shoes sold is probably five times as great as utility alone could account for. Twenty years ago the average woman had perhaps three or four pairs, while today many of them have from ten to twenty pairs in the closet. Women's shoes have been deliberately merchandised and sold with the desire for personal adornment definitely in the minds of the men behind those sales plans—an organized effort to cater to that compelling want. This dramatic case has been cited by Mr. Goddard, the editor of the *American Weekly,* in his most interesting book, "What Interests People—and Why."

To turn from a basic want of women to a basic want of men, we observe the desire on their part for affection and lasting friendship. Those engaged in the marketing of flowers, candy, jewelry and countless other gift items, have induced the men of this country to spend *hundreds* of millions to satisfy this very real desire.

Following the same man to a more mature point in his life, we see him eager to insure the happiness of his family against the dangers which might result from his death; and so the insurance companies induce American men to part with more than three billions of dollars every year in exchange for a piece of paper which promises them that their wives and children will always be comfortable and safe.

Men have their vanities — even married men. While the fundamental desire for personal adornment may not be quite as strong in them as in women, it is nevertheless a vital force, though often disguised or rationalized in terms of utility or convenience. To induce men to spend money in the satisfaction of this want the manufacturers of watches have made a great play on the wrist watch. As a matter of fact, the wrist watch was made smart and masculine by the officers of the British army. Only a few years after the War wrist watches were out-selling pocket watches in lines retailing at $20.00 and over. Today utility seems to be making this market a permanent one despite the sacrifice in accuracy.

Another example of the fact that men crave personal adornment, even though disguised as convenience, is the success of the cigarette lighter. The manufacturers of lighters have induced men—women, too, for that matter—to spend $35,000,000 in five years on this novelty. It should be noted that when such an item achieves wide popularity it becomes more or less of a social custom — what we might term "standard practice." Everyone has them. Then the product stands or falls on its utility, and the rapid production of cheap imitations may undermine the earnings of those who pioneered and specialized on the new idea.

We have commented on a basic want among women and a basic want among men. There are cases where both sexes have the same fundamental desire. Today in millions of homes both the husband and the wife prefer to have a small family; they want their children to reach a social, educational and financial level which they themselves have not been able to attain—and for that reason, as well as for other reasons, they want a small family. To meet this want, the manufacturers of products like Lysol and Zonite have induced the public to spend many millions of dollars. Do you remember the Lysol advertising of ten or fifteen years ago which showed a pail and a scrubbing brush? And have you noted how the new presentation of such products has multiplied earnings? Here again we see a human want translating itself into an inducement which causes the public to buy in volume. And we see public opinion supporting this trend.

The automobile situation is another case where an age-old want on the part of men as well as women has resulted in free spending. Perhaps 90 per cent of the people who buy Packards, Cadillacs, La Salles, have incomes of less than $10,000 a year. What inducement causes them to spend money out of proportion to their incomes for the purchase of costly automobiles? Is it not because they crave the respect or, to be quite frank, the envy, of their friends and others with whom they come in contact? This universal desire for social prestige may account for at least 50 per cent of the expenditure for automobiles.

The desire for social prestige along with diversion shows itself in another way, largely among men, but also among women: The public has been and is being induced to spend fifty millions of dollars for the privilege of playing polo and riding horseback. In 1911 men bought automobiles to satisfy the craving for distinction. Now these same men and their sons are buying or riding horses for the very same reason. "It is Smart to be Different Rather Than Thrifty" might be the sales appeal of the horse industry.

The same desire for distinction or social prestige manifests itself in another interesting way: One of our friends who has participated in the sales and advertising campaigns behind the leading set of subscription books says that a large part of the public is induced to part with its money, not with the thought of reading these books, but to display the set as attractive living-room "furniture" and make an "impression" on friends and acquaintances.

Needless to say, the large majority of men want money and all the things that money makes possible. To satisfy this very human desire the Alexander Hamilton Institute, the La Salle Extension University, the International Correspondence Schools and dozens of others have induced the men of this country to part with twenty-five millions of dollars yearly in exchange for an endless variety of self-improvement propositions.

Another and more insidious form of this want for riches is the desire to make money quickly—the "kick" of gambling for big stakes. In the last five years, stock market houses have induced the public to part with several billions in order to gratify that desire. Text books tell us that the stock market and similar exchanges are a necessary part of the financial machinery of the country. That is undoubtedly true. But as a matter of fact, the New York Stock Exchange and similar activities are primarily money-making operations which satisfy a human want, the direct result of the natural desire of a large part of the human race to take a chance on a big winning.

In 1930 when practically all industries were depressed, the moving picture industry made a fine showing in volume and profit. One of the most ever-present human wants is the desire for diversion, amusement, "escape"—especially vicarious romance. The perfection of the talking moving pictures with entertainment such as that supplied by Greta Garbo, Marlene Dietrich and many others has induced the public to spend five millions and more on a single picture. Many unemployed are able to find money for such diversion, and one can easily understand this very human want.

In the same classification comes the desire for vicarious thrills. So the moving picture industry again induces the public to spend several millions to see "Wings," "All Quiet on the Western Front" or "Hell's Angels."

That illustrates a selective attitude on the part of the public. There are some things they have to pass up, but the "kick" they get from talking pictures, in times like these, is so great that other wants are side-tracked.

Going back, we see a related want—the desire for music or entertainment—building the tremendous success of the phonograph companies, which offered a wonderful instrument and records that delighted millions of homes as an inducement for the spending of perhaps $300,000,000 per annum. Then we see the Victor Company failing to sense in time the public's "shopping judgment" with respect to radio. Soon we find the consumers of America spending $500,000,000 per annum for radios — a stronger inducement with respect to this want for music and other entertaining programs.

This universal want, this craving for diversion, "escape," amusement, play, shows itself in other ways. Those engaged in various "sport" industries profit considerably from that underlying cause. Witness how the public is induced to spend probably $750,000,000 a year for golf, tennis, sailing, etc., and for the fun of attending football, baseball, etc.

Finally let us not forget the $2,800,000,000 a year which go to the bootlegging industry and "home-brew" products, to help satisfy this desire for diversion.

Thus we see how human wants, the bases of sales plans, underly the growth of whole industries. The money volume of the industries of this country or any other could be used as the basis for graphic charts representing the *truly fundamental wants* which demand satisfaction, if you frankly go behind the common and often superficial catch phrases to the very heart or essence of human desire.

This may all seem quite obvious, but if we apply the same line of thought to individual companies, the principle becomes sharper, more dramatic, more suggestive.

Comprehensive Example of Driving Forces in One Company

This is a summary of the development of Ambrosia, the pore-deep, liquid facial cleanser, which entered one of the most highly competitive fields in the spring of 1929 and has in two years created a capital value of two and a half to three million dollars.

As you know, one almost universal want on the part of women is to attract the opposite sex, which translates itself into the desire for a beautiful, healthy skin. Manufacturers have induced the women of this country to spend more than three hundred million dollars a year for products and treatments which promise the satisfaction of this want. It is no longer necessary to headline the basic incentive, a rich and adorable husband or lover. Today, women are more interested in authoritative advice, a scientific preparation or method.

Our search for a new merchandising idea in the drug or cosmetic field resulted in the discovery of Ambrosia, a liquid solvent which cleanses the pores and crevices of the skin, stimulates the circulation, and thus gives the individual woman all that she can reasonably expect in the development of a naturally beautiful complexion.

Analysis disclosed a great opportunity for a liquid cleanser as the logical competitor of cold creams and cleansing creams, which are not in line with medical practice and tend to clog the pores.

It seemed reasonable to believe that a more thorough and more convenient method would attract repeat customers and not only cash in on the twenty- to thirty-million dollar market for creams but win new customers from women who used soaps which many condemn.

Then came the development of the Ambrosia bottle and label, the final choice from some thirty-seven sketches which were made and considered before the decision was ultimately made.

Equally important was the decision as to price. Several investigations among more than a thousand women suggested the dollar price, a policy which was made effective in January, 1930. Incidentally, the quantities were increased 50 per cent as of April 1, 1931, giving the consumer a still larger value.

Another basic step was the working out of very specific and expert directions as to the use of this product for skins of different types — dry, oily, normal, etc. And as an outgrowth of this work came the research clinic in the fall of 1930, in which the skins of three hundred and fourteen women were studied, resulting in the publication of a comprehensive book through the collaboration of a noted beauty editor and the dermatologist who carried on the experiments.

In the spring of 1929, the New York metropolitan district was opened. New methods of distribution and advertising were employed. Sampling was conducted on an unprecedented scale. In June, the "Saks Plan" brought twelve thousand women into Saks Fifth Avenue store. A total of two hundred leading stores in as many cities mailed out 1,500,000 direct-mail announcements. Six hundred thousand women responded.

After test campaigns to choose the strongest of four appeals, the 1930 program was formulated.

On January 10, 1930, national distribution among twenty-five thousand independent and two thousand chain stores was effected in forty-eight hours. One hundred and twenty wholesalers with sixteen hundred salesmen had provided a hand-picked list of the best retail outlets in the country. Starting in November of that year, powerful trade-paper advertising had prepared the way.

Intensive advertising in magazines with sixteen millions in circulation started in February, 1930. One page alone produced 570,000 replies through the offer of a seventy-five cent flacon on a complimentary basis. Sales rose beyond previous estimates. The year 1930 actually showed a small net profit.

During the fall, the clinic previously referred to was conducted, first, to obtain clinical data on the efficacy of Ambrosia itself; second, to test and perfect a new cream for dry skins, and a new tightener for oily skins; third, to provide the facts for a new one-hundred page book on skin care, a special edition of which became part of the Special Ambrosia Offer in the spring of 1931.

This special offer campaign is now running in magazines and newspapers with a combined circulation of twenty-four million, giving a total of eighty-one million impressions. The March circulation of the April magazines sold out hundreds of department stores, dealers and jobbers. Re-orders carried March sales of this year to four times March of 1930. For example, Wanamaker's in Philadelphia sold out three times in one week, disposing of more than four thousand packages, while a drug store in Allentown, a manufacturing community of about ninety thousand people, sold 144 in a single afternoon.

The 1931 special offer was also promoted through dominant trade-paper advertising, direct mail, broadsides and publicity.

In conclusion, after fourteen months of national coverage, or two years of marketing effort, this business has become one of the eight or nine leaders in its industry.

As you know, the work of a selling organization in the handling of a specialty like Ambrosia, which depends primarily on consumer demand, is of secondary importance, although a very necessary and indispensable element.

Some unique methods were followed in this instance. In the New York introductory campaign, dealers were supplied with flacons to be given to the consumer free of charge upon presentation of a coupon and for this service the dealer received a four-ounce bottle which he was free to sell at the regular price. Thus immediate distribution was obtained with comparatively little effort and a considerable amount of good-will was established.

After the Saks Plan of direct-mail tie-up had gone over in New York, it was decided to add three class magazines to help build up a high-grade national distribution at once. A carton containing $27.00 worth of Ambrosia (retail value) was sent on a complimentary basis to the best department stores and specialty shops in America, two hundred of which, as mentioned above, had followed the example of Saks Fifth Avenue by circularizing their charge customers at their own expense and distributing the complimentary samples.

The national distribution among wholesalers and retail druggists in January, 1930, was obtained in this way: Selected wholesalers chose the names of the better stores to which they were selling and these names were sorted to eliminate duplicates. Then a counter carton containing two $1.75 bottles and four $1.00 bottles was sent on a complimentary basis to about thirty thousand retail outlets, including the individual units of the principal chain-store systems.

Amazing good-will, largely expressed in counter displays and enthusiastic sales co-operation, resulted.

That procedure made possible the establishment of sales zones, sales territories and quotas on a reasonably scientific basis. By plotting out county by county the retailers in the list of thirty thousand supplied by the wholesalers and by indicating which wholesale center the retailers had bought from, it was possible to set up sixty-eight sales zones, clusters of which were shaped into workable territories for the Ambrosia salesmen. Then came the setting of quotas which were based on magazine circulation and other indices of buying power.

While this whole Ambrosia program is a fascinating series of inter-related ideas, plans and methods, it can be boiled down to a few important principles:

1. The interpretation of a universal want among women—sex attraction and beauty—which had carried itself to the point where women were ready for a medically sound treatment, and medically correct preparations.

2. Recognition of women's receptiveness to a new attitude on the part of the manufacturer, the sincerity of which would stand out in contrast to the intemperate claims and purchased testimonials used by other cosmetic advertisers. This reached its climax in what we may term "dominant sampling," the complimentary distribution of a seventy-five cent flacon.

3. The propagating of the inducement to the public in a wholly new advertising presentation—in newspapers, direct mail, magazines, store displays, etc. The substance of the medical approval of this method was developed in an utterly sincere tone and treatment.

4. The propagating of the facts about product and the courage and sincerity of the maker in conjunction with novel but sound distribution methods. This step covers not only the initial distribution activities but the attitude of the men, the spirit that ran through their daily contacts, the substance, tone and flavor of the trade-paper and direct-mail trade promotion.

Here we have, in a period of twenty months, a successful combination of "fuel mixture" and the propagating of the inducement which corresponds to the power-plant function of "combustion."

Example of Driving Force in Selling Men

This is a summary of the success of the Tidewater Oil Company in marketing a branded oil, Veedol, and a branded gasoline, Tydol.

The conceptions behind both products, compelling inducements to car owners, and the plans and methods of propagating those inducements go back to 1915 and 1917 respectively, showing that, then as now, the driving force in planning sales is an idea.

The Veedol development came first. In 1915, this product, though good, was without marked individuality. Intuitive judgment, expanded and supported by research among consumers and in the laboratory, showed the need for an automobile lubricant that would resist the high heat of the internal combustion motor. Men who owned automobiles *wanted* better performance from their engines, more power, smoother operation, less trouble from carbon and other causes, better mileage, less expense. They needed and probably would appreciate an oil that would hold its lubricating body despite the high heat of the engine.

So after months of chemical and dynamometer testing two men perfected a new formula and a new process which yielded an oil that reduced sedimentation by 86 per cent.

Thus an inducement was set up which in five years persuaded automobile owners to multiply their expenditures for this product, increasing the sales from less than $500,000 a year to $6,500,000 between 1916 and 1921.

So much for the inducement. The factor of "combustion" involved the advertising campaign and the work of the sales organization. The total automobile owners in the country were then only slightly in excess of two million, a market so thin as to make direct distribution to the retail trade very costly. It was determined to appoint certain jobbers as distributors and to allot each jobber or distributor exclusive territory, provided he turned in a volume that would justify continuing that relationship with him. But the whole burden was not shifted to him. Twenty-five men were busily engaged not only in cementing the relationships with the distributors but in helping the distributors and their men to open up desirable retail outlets in every worthwhile community.

Lining up eight to ten thousand good retailers in one year left the company with another serious problem — converting consumers' buying interest into actual retail sales or reducing loss of "sales energy." A salesman would spend three hours to get an order, but would not spend three minutes to put up a metal flange sign or other display. This problem was attacked in a vigorous way and solved. Thousands of retailers, by putting up the orange and black sign, increased sales three or four to one.

So by a long series of carefully prepared and actively controlled plans and methods, the business grew from nothing to the second largest volume of its kind in this country.

Note the basic factors — the latent underlying want and the inducement in the form of a lubricant that resisted heat for which men gladly spent their money in preference to other brands when they sensed the significance of the Veedol sediment test.

Note also the power behind the propagation of this inducement through the advertising, through sales effort, in all the forms which were suited to this individual problem.

Undoubtedly loss of energy between the buying public and the channels of trade was a heavy drag on the business. Internal friction at times reduced the number of new accounts or the volume of old accounts. But the basic driving force carried the business on to great volume and great profit despite all handicaps. That driving force caused the management and the sales and advertising executives to analyze causes of difficulties and invent ways and means of overcoming them. These men had a sense of power and achievement ahead.

Now let us consider Tydol gasoline. When the company decided to invade the gasoline market in New York, a product was submitted which was as good as any, but no better. It was pointed out that the company had no right to ask for business without deserving it, that they must supply the car owner's want in a better way in order to earn a place in the field.

An examination of all the papers on the subject of gasoline and carburetion in the Society of Automotive Engineers' journal indicated that car owners would welcome a fuel which would vaporize rapidly, using perhaps fifteen parts of air to one of gasoline instead of the usual ratio of eight to one required by sluggish motor fuels.

A presentation of such an ideal product was concreted in the form of layouts, headlines and copy, and the President's son invited his father to view the series of provisional announcements. His comment was, "This is fine, but there isn't a word of truth in it."

He was told that he was being let in on a secret, that the idea was to make a gasoline equal to this presentation. His eyes sparkled. He called a meeting of twelve executives and at that meeting he and his brother "staked out" the specifications of an automobile gasoline that would induce car owners to demand it in preference to other brands. It offered them results they had never enjoyed before.

Less than $10,000 was appropriated for the introductory campaign. The story was told truthfully, but dramatically and with surprising results. The switchboard was tied up for ten days with calls from express companies, bus companies, manufacturers, and countless others who asked for samples and wanted salesmen to call. In those days garages and others who sold gasoline handled only one brand. One hundred and twenty-five of them gave up the leading competitor to buy this product because of the response from the public.

The product was sincere; the advertising was sincere. The inducement to meet the want was present, and the inducement was propagated not only through powerful publicity, but also through the work of a fine selling organization which was inspired in turn by the quality of the product and the spirit which pervaded the organization.

Before long, men behind gasoline pumps were saying that half the motorists wanted this product. This was further evidence that the inducement was adequate to the need and that the propagating of the inducement was in terms that caused them to respond.

Fundamental driving force in sales planning will win a market among men just as it will win a market for Ambrosia among women.

Analysis of Wants and Inducement with Respect to Automobiles

Last fall we were called upon by a large automobile producer to do advisory work in connection with the marketing program as a whole. To set up the activities which might be and should be carried through, a quick, yet effective, study of positive and negative factors was made.

This consisted of charting the ten-year record of twelve leading cars and marking each significant upward or downward movement in each business. Then five men with experience in automobile marketing problems set up a ballot listing the factors that might drive a company forward or pull a company down. Five gradations of opinion were provided for in the voting on each factor. A total of 120 ballots was obtained.

Thus positive factors in order of importance were rated in two groups—product and management.

Likewise the factors tending to pull a company downward — negative influences — were rated in the same two groups (product factors and management factors).

POSITIVE PRODUCT FACTORS

Performance	100
Dollar Value	95
Good-will	94
Appearance	74
Service	72
Dependability	69
Comfort	57
Depreciation	19
Operating Cost	17

POSITIVE MANAGEMENT FACTORS

Price Class Merchandising	100
Distribution	82
Trade-in Policy	66
Advertising	60
Publicity	33
Factory-Dealer Relationship	33
Dealer-Consumer Activity	20

NEGATIVE PRODUCT FACTORS

Lack of Good-will	100
Unsatisfactory Appearance	78
Poor Dollar Value	76
Excessive Depreciation	60
Unsatisfactory Service	42
Lack of Dependability	34
Lack of Performance	30
High Operating Cost	30
Lack of Comfort	25

NEGATIVE MANAGEMENT FACTORS

Ineffective Advertising	100
Questionable Price Class Merchandising	94
Poor Dealer-Consumer Effort	89
Weak Factory-Dealer Relationship	66
Weak Distribution Machinery	60
Ineffective Publicity	51
Non-Aggressive Trade-in Policy	14

This work provided merely a rough yardstick as the basis for discussion. It was all done on a broad common-sense basis in less than a week. Needless to say, a considerable volume of extensive and costly research would be necessary to iron out duplication and perfect these values. The yardstick, however, served its purpose as a starting point for sound thinking with respect to the broad planning of sales efforts.

It enabled some of the executives of this company and our own organization to recognize in specific terms what the automobile buying public wants with a fair degree of evaluation applied to each point, and to compare that picture of what the public wants with the inducements which this particular company had offered and would offer.

It is impossible for us to discuss this interesting case in all its interesting but confidential ramifications, but we can report that the conclusions arrived at were fully substantiated by subsequent developments.

With this yardstick in mind, it may be interesting to review a few examples of cars which either offered inducements that satisfied basic wants or failed to do so.

The Model T Ford offered unequaled dollar value, good-will, dependability, slow depreciation and fairly low operating cost, but the time came when the Model T Ford did not offer the performance, appearance or comfort which the public wanted. Hence its decline. If the study of basic wants had been part of the thinking of the management of the Ford Motor Company, would the situation that existed in 1927 have come about? On the other hand, the success of the Model A was insured by outstanding performance, the continuation of unequaled dollar value, the expansion of existing good-will, appearance which captured the imagination of the public, fine service, traditional dependability, an unexpected degree of comfort, low depreciation and satisfactory operating cost. Thus the price-class merchandising program was sound at the time, and this, with remarkable distribution facilities and highly effective advertising and publicity, insured the results which followed. The principal weakness in Model A, if any, was the four-cylinder motor.

And that raises an interesting question, which the General Motors people are trying to answer.

It leads us to Chevrolet. Do you remember in 1916 when Jack Eustice, human newspaper man, wrote the slogan, "The little aristocrat of motordom"? Do you recall that right up to 1927 Chevrolet offered a modicum of style or appearance which meant something to the public?

Applying our rough yardstick to the Chevrolet position, its inherent weaknesses in 1927 and 1928 are very apparent. A detailed analysis of the Chevrolet program during that period when Ford was crippled, would undoubtedly disclose great opportunities that were missed.

But let us turn to the recent attempt on the part of the Chevrolet to meet the wants of the public more perfectly than the Ford has met them — a smooth, six-cylinder motor, eliminating four-cylinder vibration and giving better all-around performance, increase in dollar value, increase in good-will, appearance that surpasses Ford, improvement of service, the stepping-up in dependability, the added comfort, favorable position with respect to depreciation, low operating cost. What an interesting situation this makes during the present period of depression, with Chevrolet leading in the first three months of the year.

Now let us go back to the coming of the Dodge in 1916. What did the consumer whom the Dodge Brothers saw as their market actually want? Many wanted to drive a larger and more expensive car than a Ford, a car in which they could take a greater amount of personal pride and one that was as good or better with respect to material, workmanship, dependability, etc. What inducement did Dodge Brothers offer which carried the Dodge production in ten years from zero to some 200,000 automobiles per annum? The inducements were a price of about $800; conservative, well-tailored lines; baked enamel finish; dependability; a greater degree of comfort, and distribution facilities and background in keeping with the basic merchandising conception.

Note, however, the decline of Dodge through failure to maintain a lively and penetrating interest in the wants of the public. What a dramatic case! We see Wall Street bankers buy the business for $150,000,000 and fail to sense the desire on the part of the public for six-cylinder performance and the general modernization of product.

Could there be a better example of the positive effect and the negative effect of adequate and inadequate driving force?

The sensational development of the Essex at about the same time is worthy of note. Apparently Mr. Jackson and his associates sensed the latent desire for a small, six-cylinder, closed car at a reasonable price. This recognition of a want stands as one of the turning points in the history of the industry. The coming of the Essex coach and the Hudson coach revolutionized the attitude of the public and all manufacturers with respect to the production of closed cars. This basic conception was largely responsible for carrying the Hudson Motor Car Company to the highest point in its career, third place in the industry. Note the power of a basic driving force behind the growth of this organization.

The vital force behind the Chrysler development during the three-year period from 1924 to 1926 is exceedingly interesting. Apparently the famous trio—Zeder, Skelton and Breer—under the guidance of Mr. Chrysler and his associates, saw clearly that the public would welcome a new type of motor car. Performance and appearance—speed, power and acceleration; line, detail, finish and color—were combined in a way that had never been done before. That inducement caused the public to buy more than thirty thousand Chrysler 70's the first year, and soon made the Chrysler organization a dominating factor in the industry. The success of this car had a sweeping effect on the products of all the other plants from the cheapest to the most expensive.

One of the less talked-of but most suggestive cases in the industry is the job which Mr. Reuter did with the Oldsmobile. Here was a car that meant practically nothing to the public or the trade, a business that General Motors was probably disposed to liquidate. Mr. Reuter and his associates saw an opening to do something that had never been done before in the $1000 price class—to put out a really first-class small car which offered a composite of all the factors that the public wants. One must admire the intelligence they applied in their evaluation of public wants and their technical and creative ability in providing a product which was in harmony with those wants—an inducement which soon caused the public to multiply its investment in this car five to one and made it the leader in its price class. Note the appearance of the car. The Oldsmobile management very wisely adapted to the $1000 market the accepted fashions in higher-priced levels—not superficially but expertly—by working with proportions and "tone" as well as obvious characteristics. Success in propagating the inducement, sales control, and the eliminating of sales friction, all grew out of the basic driving force injected into the business at the outset.

Compare this admirable styling with the amazing situation that occurred in another member of the General Motors family when the 1929 Buick with its fat body was offered to the public. It seemed inconceivable that the Buick car, which was in no sense a style leader, would attempt to put across such a radical thing. Even though the job had been good looking, it is doubtful whether a radical innovation could have been launched by a $1500 car unless that innovation had first been sponsored by custom models and the more costly cars selling from $2500 to $5000.

You all know the result, a falling off of perhaps 30 per cent below quota. But note how quickly Buick came back, how this organization, with its background of good-will and with the elements of performance, dollar value, dependability, comfort, etc., in its favor, recaptured and increased its market through offering a combination of elements which paralleled the basic wants of its public.

Does not this review raise an interesting question whether some one outstanding inducement can win in competition with a combination of three or five outstanding inducements?

In the grocery field there are several interesting examples of driving force, the capitalization of a fundamental want by a compelling inducement.

Let us start with coffee. Those responsible for the development of Yuban Coffee, introduced in New York in 1913 by Arbuckle Brothers, knew that the public wanted flavor above all else. So they dramatized the quality of Yuban by presenting it as the private coffee of the greatest coffee merchants, surrounding it with an atmosphere which surpassed any previous campaign of its type. Note that the advertising conception made concrete the idea of flavor which people want. Yuban outsold all coffees of its type in New York in fourteen weeks. This success was duplicated in Chicago in seven weeks.

A large increase in the volume of Maxwell House Coffee resulted from an equally able application of the same principle, recognition of the public's desire for flavor. The idea, however, was different. The inducement to the public was the background of the old South where aristocratic families insisted on the finest flavor in everything which came to the table.

The development of Chase & Sanborn's Coffee, another striking success, is also founded on the recognition of the public's keen interest in flavor. In this instance, however, there are two sides to the inducement, first, the dating of the package, made possible by the Fleischmann delivery system which calls on perhaps 300,000 retail stores twice a week, and secondly, the dramatization of freshness in the presentation. These two inducements have made Chase & Sanborn either the first or second largest selling coffee in a short space of time.

Incidentally it may be noted that on products like coffee and gasoline which are bought once a week or more often, the effectiveness of advertising is far greater than on commodities bought at less frequent intervals.

The yeast situation is a striking demonstration of what the proper "fuel mixture" will do. Those responsible for the planning of Fleischmann sales programs discovered the health value of yeast through clinical experiments. They saw that the public wants health, perfect elimination, purification of the system, the resulting benefits in the condition of the skin, etc. By supplying this want through the medium of yeast, they have induced the public to spend at least $12,000,000 a year, an amazing outlay for an item that retails at three cents per cake. It is all the more impressive in view of the unpleasant taste of yeast and the inconvenience of buying and eating it regularly.

As a by-product of this new development came the public's desire for yeast in a delicious form. They wanted the health value but they also wanted an appetizing flavor. The Tastyeast people, through combining yeast with chocolate in a delicious candy bar, have induced the public to spend for their product at least two or three million dollars a year in a surprisingly short space of time.

An example of how a latent want for new flavor may be quickly capitalized is Canada Dry Ginger Ale. Such dissatisfaction as existed with ordinary ginger ales was latent rather than active. The coming of prohibition naturally had an influence on the progress of this product. Those responsible for the introduction of Canada Dry felt that the public would welcome a new and different flavor with a characteristic appeal, and that this beverage would not only cash in on the new market of those who turned to soft drinks but would also win a place for itself among those who might use it as a mixer. The individuality of this product was sufficient inducement, as you know, to build a retail volume running into twenty-one million dollars per annum.

Before leaving the grocery trade, let us touch on soaps which, through the forces to be described, have spread out from grocery stores to drug and department stores.

It is said that Ivory Soap was a mistake, an accidental discovery. But someone felt that the public would welcome a more convenient soap, and that a pure, white, floating soap would induce the people to buy in volume. Ivory, as you know, was an all-purpose product—face, hands, bath, woodwork, curtains, fine fabrics, furniture, etc., etc. Surely you can remember the old campaigns on a score of different uses. Then Mr. Countway of Lever Brothers and his associates recognized a latent want among millions of women for a new type of soap, one specially made for fine fabrics—silks, woolens, chiffons—pure soap in flake form. Lux was the inducement which built an annual volume of $10,000,000 in a few years' time. It has grown steadily from its introduction to the present.

Procter and Gamble followed suit with Ivory Flakes. Others followed with their own brands not only filling the public want but expanding it through their publicity.

Mr. Countway and his associates again recognized a latent want—the need for a more convenient and more efficient product to be used in the family wash, in washing dishes and other household work. Rinso, good soap in granular form, was the inducement which again brought volume. Once more Procter and Gamble recognized the trend toward specialized products which their competitors had demonstrated. Seeing the importance of this consumer need, they brought out Chipso, an all-purpose soap flake, the individuality of which (resemblance to more costly flakes) gave it a competitive advantage over Rinso.

Thus we have a sketchy outline of how a long-standing human want may become specialized and how the manufacturers who first recognized those new and growing wants profited enormously.

In the toilet soap field equally interesting developments occurred. Back in 1910, the twenty-five cent facial soaps—Cuticura, Resinol and Woodbury's—were obtaining small but steady volume. Those responsible for planning the sales of Woodbury's knew that all women want personal beauty. They also knew that women would not pay twenty-five cents for soap as soap but would gladly pay that or more for beauty treatments which would remedy skin difficulties. Then followed one of the classic campaigns in the history of American advertising, an appeal so enticing that in about twelve years the sales volume of Woodbury's increased 1000 per cent — a further inroad on Ivory and other all-purpose soaps — satisfying a specialized want with a specialized inducement.

Palmolive, with a good ten-cent item, diagnosed the situation, recognized the widespread interest in beauty and the correction of skin problems, presented their product in this new light, and induced the public to buy it in such volume that the position of Ivory was again affected. The Lever Brothers management, always alive to the viewpoint of the consumer, sensed women's desire to buy a product fine enough to be used on the face and freely in other ways—so they developed Lux Toilet Form, a fine-milled soap, beautifully designed and packaged. Almost overnight it became another large-scale success, another cut into Ivory. In self-defense, Procter and Gamble recognized the public's preference for specialized products of this class and developed Camay.

Surveys indicate that the volume of Woodbury's facial soap and similar products has fallen off perhaps 50 per cent in the past five years. With that fact in mind, note that the sale of cold creams, cleansing creams, tissue creams, has grown from perhaps three million dollars in 1911 to nearly thirty million dollars in 1931.

It seems that the same underlying force which made possible the success of Woodbury's, Palmolive, Lux Toilet Form, Camay and others has contributed to the growth first of creams and now of liquid cleansers.

The Pond's Company is the outstanding example in the cream field. Fifteen years ago, the sales curve in winter was favorable, while in the summer it dropped down toward the bottom of the chart. That was the problem.

There were then about two and one-half million automobiles and new-car sales were approaching a million a year. You remember the dust and the dirt, the family parties when everyone was covered up with goggles and dusters. One day a woman copywriter with an amazing insight into the wants of consumers conceived the idea that a woman's desire for a beautiful skin (the need for better cleansing) might make it possible to sell cold cream for that purpose. The inducement she presented to the public was so compelling that the use of cold cream as a cleanser spread by leaps and bounds. Soon others followed. Gradually cold cream formulas were improved. Cleansing creams followed. In a few years they achieved widespread popularity.

The Pond's Company was an outstanding success when Elizabeth Arden's Salon and her preparations were comparatively unknown. But Elizabeth Arden's plans were soundly conceived. She understood the power of the universal craving for beauty. She understood the appeal of *specialized* preparations coupled with personal service. Her inducement was the new treatment idea, special treatments and special products for special cases presenting special problems or conditions. From her salon, the business spread out until today her total volume compares quite favorably with the Pond's business. Then came Rubenstein, Dorothy Gray, Primrose House and others. Only recently the merchandising director of the Hudnut Company, after analyzing this human want, developed the duBarry line, offering not only superlative products but the expert advice of a large organization of carefully chosen and highly trained demonstrators. A large and quick success resulted from this soundly conceived plan.

How interesting to see the relationship between Ivory Soap (an all-purpose product) and the specialized soaps such as Woodbury's, Palmolive, Lux Toilet Form and Camay; then the relationship between the specialized soaps and the widening market for cold creams and cleansing creams; then the relationship between these popular-priced, standardized products and the upswing of salon lines represented by Arden, Rubenstein, Dorothy Gray and duBarry; then the relationship between the confusing variety of creams, etc., and the powerful new trend toward liquid cleansers—all a dramatic example of the persistence of a human want, demanding new and more efficient forms of satisfaction.

The new inducements that come from time to time and win large volume and profits are those which do more to satisfy an ever-present, unchanging fundamental want.

The dentifrice situation is enlightening.

Our great grandfathers and grandmothers supported a flourishing business in false teeth. They wanted to chew their food; false teeth satisfied that want.

But the public was not really satisfied. Those who conceived and promoted tooth-powders saw that people wanted to keep their own teeth healthy and free from aches and pains. The inducement which they offered built a large volume among millions of loyal consumers. Then Colgate and others promoted tooth-paste as a more convenient solution of the problem, and achieved volume on tooth-paste far exceeding that on powders. In 1917 the sponsors of Pepsodent sensed the desire for teeth that were both white and healthy, and promised to "Remove that film," with the result that in ten years they achieved a volume close to Colgate's, in the neighborhood of $7,000,000 per annum. Others followed suit, holding forth powerful inducements which attracted large volume. Pebeco's inducement was freedom from acid mouth; Ipana's inducement, the health of the gums as well as the teeth; Forhans preached "four out of five"; Squibb's inducement was milk of magnesia to protect at the danger line. And so it went until Listerine, with a background of quality, medical endorsement and halitosis, made price its appeal and jumped into second place.

So again we see the changing viewpoint of the public with respect to new methods of satisfying an ever-present, unchanging want. We see how sales planning must start with the "fuel mixture," the recognition and interpretation of a want in terms of a product or a proposition—some sharp inducement—which will be in harmony with the public's interest.

Earlier in this paper, one of the most deep-seated wants—sex appeal—was referred to. How new inducements to satisfy this want built two fortunes, one substantial and the other amazingly large, is illustrated by the Odorono business and the expansion of Listerine, successes which may be closely related.

Odorono was the result of Mrs. Edna Albert's recognition of the consumer's need for something to prevent perspiration stains which ruin lovely frocks. That appeal induced several hundred thousand women to buy and use her product. But the time came when that inducement no longer brought regular increases. A survey showed that the majority of women considered Odorono a good product but believed they had no need for such a preparation. The man in charge of this advertising said to himself, "Is that so? Well, I don't believe it. Nine out of ten do need it; we will soon find out." Medical authorities told him that a woman cannot notice perspiration odor which arises from her own person, whereupon he wrote such headlines as "She never knew how close she came to happiness," and told how a young debutante, the most popular girl in her set, failed to win her man. Sales doubled in one year as a result of this.

The man responsible for this Odorono success sent his representative to call on the Lambert Pharmacal Company, pointing out that perhaps this same inducement would persuade millions of people to use Listerine as a mouthwash. Though nothing came of it at the time, the idea fell on fertile soil. Later on the Lambert Pharmacal Company developed this inducement in their campaign which was conducted by another advertising man. Shortly afterward he conceived the classic campaign on halitosis, the results of which you all know. What was the formula? That women want a rich husband, social success or a lucrative job; that men have similar needs. So he promised them freedom from halitosis through the use of Listerine. The result was the growth of the once small business to an annual earning of $8,000,000 a year.

The basis of the business in proprietary medicines is, of course, self-evident. Everyone who has a pain or some definite sickness naturally wants to obtain relief. So the inducements which manufacturers of proprietaries offer, which persuade the public to spend in the neighborhood of $550,000,000 a year for such preparations, are methods or hopes of correcting specific troubles. Only a few houses in this line attempt to prove the efficacy of their products. Usually the consumer's want is so keen that he or she will accept a suggestive statement or promise—or the word of some former Senator or Congressman.

However, the inherent value of a preparation, and the truthfulness and sincerity of the advertising have a very real influence on the determinance of such a business. An example is the growth of Dr. Scholl's Zino-Pad (for corns) from its starting point about ten years ago to first or second place today. The public wanted, or was receptive to, a quicker, more modern method of treating corns. Dr. Scholl offered a new type of treatment more scientific than liquids or old-type plasters, emphasizing quick results.

In the case of Absorbine, the situation was somewhat different. The opportunity for increasing the demand for old-established uses was not promising. In order to maintain and increase volume, the men in charge of sales plans turned their attention to a widespread want which had not been definitely recognized or served. They discovered that 25 or 30 per cent of the people had recently developed an annoying condition of the skin on the feet and wanted to cure it. On the basis of laboratory tests, they offered Absorbine as an effective remedy for this condition which they skillfully dramatized by the phrase "Athlete's Foot." In this way they induced more people to purchase Absorbine and use it more frequently.

Compare Dr. Scholl's Zino-Pad with Absorbine; note that in the first case the want was clearly defined and the problem was in finding a better way to satisfy it; that in the second case a latent want had to be recognized and emphasized in concrete and dramatic form, discovering the relation between the want and the product, which was unchanged.

The tobacco industry presents interesting illustrations of the effect of this "fuel mixture" that we are thinking about. Fifty years ago, the great majority of men chewed. Some smoked pipes, cheap cigars and stogies. Men in the upper income brackets smoked big black cigars. Then came cigarettes, surrounded by an atmosphere of depravity.

Men wanted the solace of tobaccco. The appeal of a chew or pipe had won the loyal support of millions of customers for many, many years, while the cigar induced others to spend a large amount of small change for that form of enjoyment. It still holds a surprisingly loyal following. Contrast the pipe-tobacco situation and the cigar situation on the one hand with what has happened in the cigarette field in the last twenty years. Men and later women wanted a convenient, mild, quick, inexpensive smoke. About twenty years ago Fatima offered twenty "Turkish blend" cigarettes for twenty-five cents. This inducement created an outstanding success at the time.

Then R. J. Reynolds, after doing a job with "Prince Albert," sensed the opportunity for a good and reasonably mild cigarette, selling twenty for ten cents, and Camel made its bow in 1913. It was a revolutionary new inducement, achieving in five years a dominating position, selling more cigarettes than all others combined and firmly establishing this pack as the volume factor in the tobacco industry.

The American Tobacco group felt that a large proportion of the smokers might try something different. Their inducement "It's toasted" came forth and Lucky Strike began to make headway. In 1924 their advertising men used a new and compelling inducement, the tax-free offer, which doubled and redoubled Lucky Strike volume. The more recent history of the toasted inducement in all its many forms you know. As part of the process came the very human appeal to women and to men, "Reach for a Lucky instead of a sweet." Again sales shot upward.

The latest campaign of Old Gold is quite interesting. With the market among women definitely in mind but with one eye on some of the men, they reverted to the million-year-old desire to attract the other sex and offered "Keep kissable" as their inducement. With what result? A reported sales increase of 30 to 40 per cent. Will Old Golds hold it? Though R. J. Reynolds led the industry in their first diagnosis of the human want, their conservatism allowed Lucky Strike, Chesterfield and Old Gold to make serious inroads. With what result? Recently their advertising people, after reviewing the wants of the public with respect to cigarettes, arrived at two conclusions: first, that the people wanted a *fresh* cigarette. Therefore, they offered the new cellophane humidor pack as a new inducement. In less than sixty days they checked the downward trend and started the curve moving upward. Secondly, they realized that the public (especially the women smokers) wanted a milder blend. So, according to reports, Camels have been modified with that object in mind. The public's interest in the new humidor pack made it possible to accomplish this change unnoticed.

Most of these cases have had to do with products bought as specialties at frequent intervals. Let us now consider other lines where the purchase is infrequent.

The introduction of glass baking dishes is a good example. Those interested in the marketing of Pyrex dishes realized that the public wanted appetizing, delicious foods, both flavor and appearance being important. The inducement, glass dishes that have a low coefficient of expansion and are very resistant to heat, was first presented in terms of appearance or style, with unsatisfactory results. Then the inducement was strengthened by dramatizing Pyrex as an entirely new way of cooking which offered sensational results—pies with crisp, brown undercrusts; bread that rose an inch higher, lighter, more delicious cakes; tender, savory meats and vegetables. This conception in the one year (when it was handled right) brought an increase of 200 per cent. On the other hand, in England, where the gas rate is high, the conception had to be radically changed. Only when large savings in cost of gas were dramatized did the English consumers start to buy. They wanted more delicious food, but first of all, they wanted to save gas.

An interesting sidelight is the fact that when Pyrex was introduced, a survey showed that 50 per cent of those who had bought it were afraid to put it into the oven for fear it would break. This indicated that probably 90 per cent of the people who had not bought it were restrained by this misgiving. To correct that condition and open the public mind to its positive advantages, a dramatic test (boiling water poured into a Pyrex pie plate, resting on a cake of ice) was used.

Floor coverings fall in the same general category of infrequent purchases. Those responsible for the success of Congoleum sensed a public need or want for something similar to linoleum at a low price.

Their inducement, a low-cost, felt-base product, in the form of rugs or yard goods, made an immediate appeal. The painted surface on felt-base paper would last just as long as the painted surface on printed linoleum. With consistent advertising a volume of some $24,000,000 was built up in seven years.

The success of the Armstrong linoleum business presents a different view of the same fundamental principle, inducement in relation to a want. Those responsible for this outstanding job in planning sales recognized the fact that the public wanted attractive, high-grade linoleum under the sponsorship of merchants of standing.

Thus, their fundamental inducement, instead of a single outstanding factor, had to be a combination of several factors in harmony with what the consumer wanted. By offering a combination of outstanding quality, outstanding patterns, superlative finish, and real value, all under a well-advertised name, and all backed by the standing of leading merchants, they passed their leading competitor, who had outsold them two to one, in less than five years.

In this case, where consumer buying was infrequent, the propagating of the inducement was very important. The distributorship program, the relationships with retail merchants, the educational work in laying and sales training, the interior decoration service, the superlative sales management, the excellent and consistent advertising, all interrelated and synchronized in a manner that no competitor approximated.

A third example in floor coverings is the Gulistan rug. The inducement—handsome reproductions of fine Orientals at a price that the middle-class home could afford to pay—capitalized on the widespread desire to emulate the wealthier homes (personal pride, love of beauty).

The "seemingly seamless" carpeting, introduced so successfully by Collins and Aikman, is a further example of compelling inducement which satisfied a widespread want.

Electrical equipment for the home belongs in the same group of infrequent purchases.

Consider the Hoover cleaner. The general idea of an electric cleaner was, of course, interesting to a large percentage of the consumers who naturally wanted clean, attractive and healthful homes, with the least expenditure of labor and time. In terms of actual selling, the Hoover organization knew that women wanted to have confidence in the purchase, to know that the cleaner was right and that the people behind it were dependable.

The inducement consisted of more than a good machine which "beats as it sweeps as it cleans"; their resale plan, tied in with leading department stores and central stations, made possible superlative demonstrations under sponsorship which provided the all-important element of confidence. In other words, as inducement the whole resale system was quite as important as the product itself. Hoover thus made use of the same factor which had played such a large part in the success of Armstrong's linoleum.

Let us consider electric refrigerators, a new answer to a basic want—the care of fresh foods.

The Frigidaire management, in building up sales plans, recognized two phases of consumer want: first, natural interest in the health value, flavor and appearance of foods, along with provision for ice cubes; and secondly, the desire for absolute confidence in the product and the company behind it. Frigidaire's competitive inducement, the backing of General Motors, was so well dramatized as to more than satisfy the second phase of the buyer's want. Thus, their presentation and the presentation of others with respect to the care of foods, etc., were translated into Frigidaire sales.

Now let us see how this desire on the part of the public for confidence in the product and the name behind it changed the situation when General Electric entered the field. The G. E. management instinctively recognized a universal desire to be assured of freedom from mechanical imperfections or troubles. So, after fifteen years of research, they offered as an inducement a new type of electric refrigerator, plus the General Electric name and all that it stands for, with the strong implication that service problems and expense would be virtually eliminated. You have all seen their recent campaign on the three-year guarantee. It is interesting to note that by catering to the same human want that Frigidaire had capitalized, but in a new and powerful manner, the General Electric Company won first place in the household refrigerator field in two years.

One company which antedated the G. E. refrigerator by several years was almost bankrupt by failure to see the importance of this element of confidence. They introduced a then revolutionary design, but cut the price under Frigidaire about 15 per cent on the smallest size. While the public was interested in price, that meant nothing when dependability was an unknown quantity. The drive which was put behind this machine actually did more harm than good; it merely advertised a weakness.

The situation in the radio industry reminds us of these amateur boxing bouts at the Garden, where one champion after another is knocked out in quick succession.

The success of the Majestic Radio is very interesting. They saw that the public wanted an inexpensive set that would give a richer, fuller rendering of popular broadcasts. Their inducement was lower price and a wider "band" covering more tones, noticeable enrichment, particularly in the lower ranges. Thus, by actively propagating their inducement, they won leadership and held it until a similar inducement by a competitor caused them to lose first place in the field.

This competitor, the Philco organization, recognized the same universal want—a richer and more complete rendering that would approximate more closely the original broadcasts. Their inducement, "better balance," meant a still wider "band" of tones and overtones, with greater fidelity and less distortion; their prices, of course, were in line. Thus, in three years, Philco has captured first place, which it now holds.

The shoe industry provides two interesting cases. The Regal organization saw that the public wanted cheap shoes that looked expensive and which would give a reasonable amount of wear. As a buying inducement, they offered shoes at $6.60 which are advertised as such faithful copies of British and American custom-made models that nine out of ten cannot tell one from the other. In other words, you can, if you please, wear a $6.60 shoe and make as good an impression as though you wore a $40 shoe from Bond Street. As you know, the plan has been highly successful.

Another success which is quite different in substance, though the same in the principle of relating inducement to want, is the rapid growth of the Enna Jettick business. This organization realized that a certain percentage of the consumers, *possibly 20 to 25 per cent,* wanted a reasonably priced arch-supporting shoe and that the consumers taken as a whole would welcome a complete range of sizes to fit each foot.

Their inducement, the first $5.00 and $6.00 arch-supporting shoes in America, in a full range of sizes which insured fit, met the public's want so well that an increase in production of more than 100 per cent was necessary in spite of the depressed conditions during 1930. Incidentally, this is a striking example of the successful use of radio as the dominant medium in propagating an idea. Broadly speaking, only companies which offer a most compelling inducement have succeeded in using radio as the primary medium. What the radio campaign did for this company is, of course, a demonstration of the wide publicity which broadcasting provides, but it is a more powerful demonstration of the appeal of the inducement which was offered.

The mail-order business in wearing apparel draws attention to an interesting contrast between what many of us have thought women want in this line and what they really want.

As a matter of fact, the only large advertiser of women's apparel today is a mail-order house, Bellas Hess. This organization knows that its public is almost as vitally interested in self-adornment as the women here in New York, that what 90 per cent of their consumers want in buying by mail is a range of styles, fabrics, colors, prices, as well as good value.

Their primary inducement is an opportunity for selection which is wider and more interesting than the selection offered by the average store where the mail-order customer would shop—plus good value. An analysis of the mail-order business would probably show that adequate selection has represented, over a period of many years, a surprisingly large percentage of the total business, and that price, while important, has accounted for a much smaller percentage of the total of mail-order volume than is commonly supposed.

A dramatic example of this desire for selection is a mail-order campaign on women's clothing, where the inquiry cost was reduced from eighty-two cents for half-page space, to a range of sixteen to twenty-six cents on full-color pages and color doubles. Although it is harder to make big space pull at low cost, the ratio in favor of pages and doubles was an average of four to one as against half-page space, simply because a wider variety of styles, colors and prices was presented. Incidentally, this suggests that on any product big space, to be productive, must contain more substance, more interest, for the reader.

Just as selection has represented a want which supported a tremendous total volume of mail-order selling, so the factor of selection has made it difficult to develop certain lines sold through retail stores. Where there is a wide variety of styles, colors, finishes or prices in a line, it is a mistake to view the problem as one would in developing a specialty, such as a cigarette or a drug-store or food specialty. The Eaton, Crane & Pike business will illustrate this principle. Here was a line with several thousand different items. The largest selling unit in the line represented about 10 per cent of the total volume. Thus a large part of the buyers went into a store with the idea of making a choice. They wanted to see what was in stock, and pick out what they wanted. To promote any one unit in the line would result in a very high percentage of waste. In one campaign the inducement, represented by the merchandise itself, was supplemented by a single inducement which would interest a large majority of all potential buyers—a complimentary book entitled, "The Etiquette of Letter-Writing," which was given to the consumer with a dollar purchase. This plan made it possible to open six thousand accounts, and brought 250,000 women into the retail stores.

A somewhat similar case was the use of a special supplementary inducement in the sale of ABA Travel Cheques. The public's basic want, of course, is the safety of its funds, currency which is acceptable everywhere. Hence the growth of travel cheques. The public has assumed that any one of several cheques recommended by the local bank was satisfactory. The ABA organization felt that the public wanted something more than the cheque itself, that a large proportion of travelers going abroad wanted information of practical value. It was decided, therefore, to present a complimentary copy of Harry Franck's book "All About Going Abroad," to each person who purchased cheques for use overseas. As a result of this inducement, 75,000 consumers were reached in a period of two months, at comparatively small expense. The majority of the larger banks expressed definite satisfaction with the plan.

There is one example of this principle of want in relation to inducement which is so simple, so human, and so dramatic as to leave an impression which may be stimulating to those concerned with more complex situations where the application of the principle is not entirely clear. This is the unique plan which enabled the Winchester Company to sell in six months as many .22 rifles as had ever been sold in three years. The women operators brought into the Winchester Works to turn out army rifles for the Allies were broken in on the production of .22's. Before long, a staggering inventory had been accumulated. The question was, how to move it?

Many schemes of every conceivable type were devised and discussed and discarded. Finally, a simple conception was evolved. It started with the recognition of a primitive want in almost every boy between the ages of ten and sixteen, the love of adornment and recognition by his friends. As an inducement, the boys were offered gold-plated, silver-plated and bronze medals for marksmanship, and later, membership in the Winchester Junior Rifle Corps. Practically all boys wanted to shoot, but this inducement made them want to buy a gun right away.

Not only was the inventory liquidated, and a large volume of new-gun business created, but the extra profit on the increase in the sale of .22 ammunition amounted to $500,000 in the first year.

The various cases mentioned have, for the most part, had to do with finished products sold to individual consumers or homes. But the driving force of a deep-seated want in relation to an adequate inducement is by no means confined to such problems.

Note how the campaign on the G. T. M. dramatized the expert advice of the Goodyear Technical Man, who is specially trained to advise the factory executive on whom he calls as to just what belting to use for a particular purpose, thus satisfying his fundamental desire for better results at less cost. We are told that during the first five years of this plan, the inducement—expert service combined with good belting—increased sales 450 per cent.

We have another good example in the building industry. Several years ago, the International Cement Corporation developed a high- early-strength cement, which is ready to use in twenty-four hours, as against a week to a month in the case of ordinary Portland cement. This product serves a very widespread want among architects, engineers, contractors and owners—a saving in time, a saving in money, and the added value of being able to use the construction at once. The manager of one local mill was able so to capitalize on this inducement that his earnings in 1930 exceeded all other units in the system. His plans and methods are now being extended throughout all territories.

The Most Common Cause of Inadequate Planning for Sales

There may be a score of reasons for unsound or incomplete sales planning, but in American industry today there seems to be one weakness that is more common than any other, the subjective type of mind in a position of great responsibility.

A curious and amusing example, which happens to be physical rather than mental, is the story of an advertising man who confused his associates because he refused to include in a radio program any music which exceeded twenty-five hundred vibrations despite the fact that many fine programs included musical notes as high as ten thousand vibrations.

Quite by accident the evidence of electrical tests suggested a personal checkup which in turn showed that he had a peculiar form of deafness which made it impossible for him to hear any music above the twenty-five hundred limit.

This sort of deafness or blind spot has many different forms. Who cannot think of case after case where forward thinking has been discouraged or a sound conception killed for some such reason?

Planning for sales is the one outstanding problem of planning for the business as a whole, the dominating and all-important responsibility of American management today—the supreme test of the open-mindedness, flexibility, imagination, humanity and judgment of the top management itself.

Conclusion

To provide the "fuel mixture" or driving force in a sales plan, the management or marketing executives need a rich background of facts.

Forward thinking may arise from general experience and judgment or it may start from one definite factor or a set of facts.

In any event, there must be a constant action and reaction between facts and creative thinking. These charts which represent the contents of what we call an Analytical Outline (Figure 2) suggest the scope of studies which are necessary to comprehensive planning for sales.

The driving force which we have characterized as "fuel mixture" seems to tie in rather closely with the commonly used term of "merchandising." But our conception of the *primary driving force* is essentially dynamic, broad enough to cover not only product, and the relation of product to the business as a whole, but whatever other factor or element is necessary in order to provide a compelling inducement and make possible a powerful sales plan.

The factor of combustion or propagating the inducement naturally covers all advertising efforts, all sales promotion, all the work of the sales organization—an equally important phase of business which should be covered in a separate paper on that one subject.

Mention was made of the fact that in an automobile perhaps 70 per cent of the energy of the gasoline may be dissipated through the cooling water and the exhaust. Unquestionably, the loss of fundamental energy in a sales program by reason of lost motion among retailers, wholesalers, etc., is almost incalculable. That, too, is a vital question which might well be the subject of a separate paper.

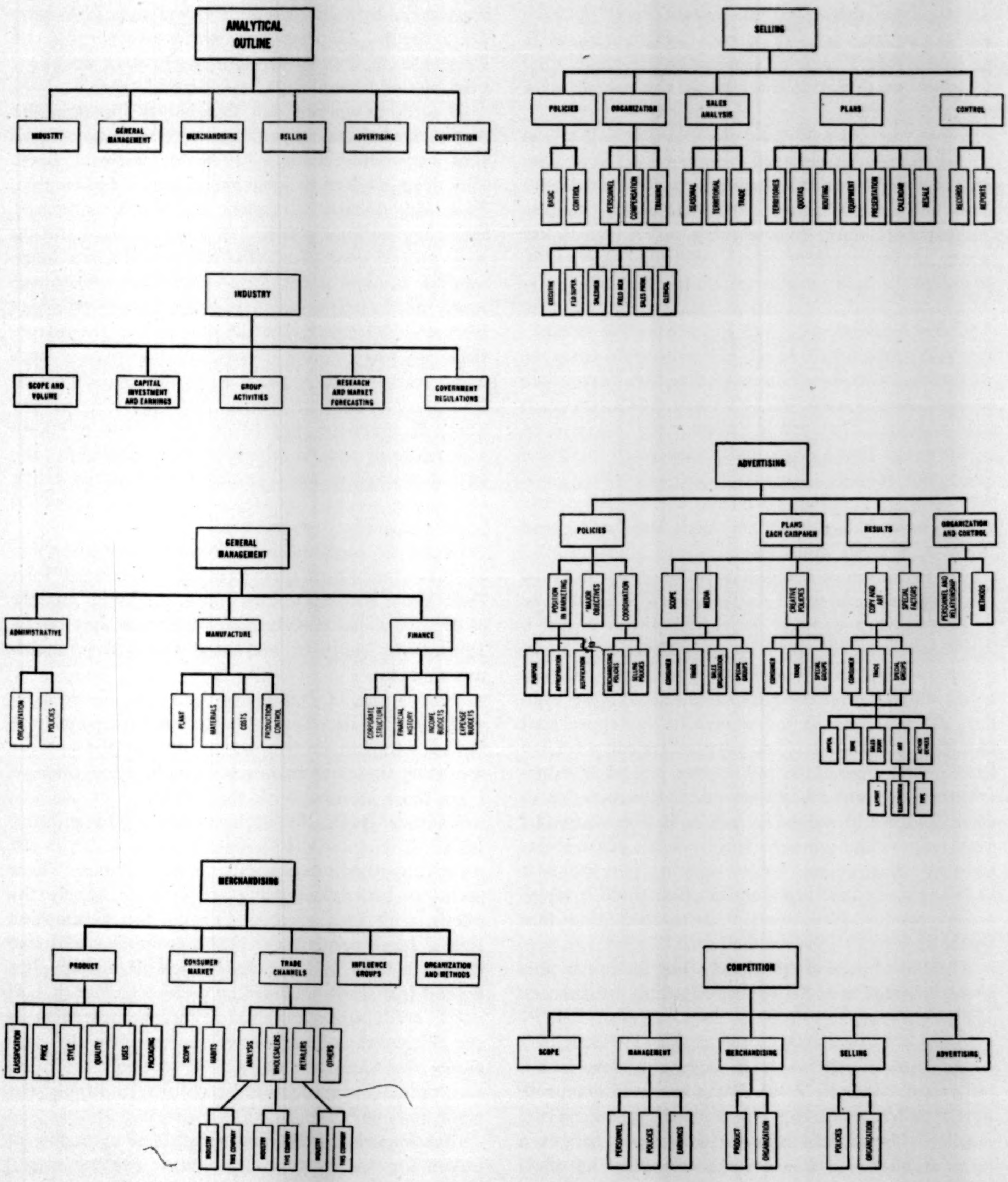

Figure 2
Detail of Analytical Outline Chart

Methods of sales control—measurement of "motion" or action—are, of course, fundamental, as is the ever-present task of eliminating friction.

These two topics might well be the subject of a separate paper.

It was our purpose today to start with the first driving force, the primary factor, which is so important when general business is depressed and when the individual company can obtain volume and earnings only by analyzing basic wants and setting up inducements which will make it possible to capture a fair proportion of the market.

Discussion

Stanley I. Clark.[2] The facts that Mr. Cowan has so interestingly laid before us are really not open to discussion. They are facts and conclusions relating to things that have actually transpired in advertising and selling.

It seems to me, however, that some of his points will stand a little greater emphasis and I am going to proceed along those lines.

Mr. Cowan has pointed out the importance of want and inducement. I think there is often danger in producing a product for which there is not a legitimate or recognized want. Oftentimes, however, a well-planned advertising program will develop the want on the part of the consuming public. As you review the numerous instances that Mr. Cowan cited, I think you will agree with me that in many cases the public was not wholly conscious of its want. The keen-minded business executive had really sensed it before it became public knowledge. The case of Fleischmann's yeast seems to typify that point. In introducing new items it is safest to be absolutely certain that there is a real want present before we go about satisfying that want.

I believe, however, that the other factors in this sales program are vitally important to its success. While the action originates in want plus inducement, the propagation of the message which, if it is successful, will result in buying action, is all-important. Pebeco Tooth Paste is one of our products. It is one of the oldest tooth pastes on the market. Two years ago we attempted to get a large number of new users of our product by offering the public a full-sized, fifty-cent tube of Pebeco for a dime. All they had to do was to clip the coupon from the newspaper, take it to a druggist, give him a dime and get a full-sized tube.

The thing worked out this way: The druggist was to send these coupons to us. For every coupon sent we would return a full-sized tube of Pebeco. The druggist was to keep the dime for his trouble. The thing looked all right. It looked as though the druggists were getting ten cents for co-operating with us. We expected that we would get a large number of new users, that the jobber would sell more merchandise, and that the retailer would get increased demand. But the day before the advertisement was to appear, we had a telegram from a newspaper in a large Eastern city informing us that one of the chain stores there had ordered five hundred copies of that newspaper. This company was ready to run an advertisement offering a tube of Pebeco and a morning paper for thirteen cents. Of course we had to stop that because it would have antagonized every dealer in town.

When the coupons were all in, we checked them and discovered how many people were named John Doe, Mary Fish and John Jones. A large number of druggists had corralled all the copies they could, clipped the coupons, and used them to replenish their stock.

That is one of the things that can go wrong in your sales plans. You have to take into consideration the human factor, particularly in the case of the drug trade. I make this qualification because I am most familiar with that trade.

Another fault with present-day merchandising which, if it is not yet serious, is going to be, is our present method of introducing new items. There seems to be an increasing tendency to supply the public with free merchandise on the assumption that a large percentage of the recipients will like the product so well that they will realize it supplies a long-felt want and will continue to use it. If every manufacturer pursues these tactics there is the danger that the time will come when the consumer, by simply waiting long enough, will find some gracious manufacturer willing to supply the want.

One manufacturer offers a bottle of antiseptic in return for two tooth-paste cartons; another manufacturer offers a new tooth brush with your name on it in return for a shaving-cream carton. Those are two instances that offhand come to me; many similar offers are being made every day. I am afraid that this form of merchandising is going to bring about a decided trade reaction from the retailers before long. We should not lose sight of the fact that for every product that is given away a sale of that item is stopped—not necessarily that particular brand, but an item in the same category. Obviously, this give-away policy will postpone a regular sale until the item received gratis has been used up. In any plans that we lay we must see that we do not antagonize any of the factors, because energy losses in themselves detract more from sales plans than anything else. Some companies maintain that these practices provoke cut prices, which in turn create absolute antagonism to a product.

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[2] Sales Manager, Lehn & Fink, Inc., New York, N. Y.

The cases Mr. Cowan has cited are a matter of record; the results of well-laid plans. But all plans are not successful. Therefore, I have just tried to point out some of the things that must be watched to insure succcess.

Archibald M. Crossley.[3] Mr. Cowan's paper is to a large extent a discussion of the value of research. Being in the research business, it is difficult to counter him.

One cannot but agree that the fuel mixture of deep-seated want and the product is the foundation of many successes in American business. We can say, however, that this fuel mixture, which today engages the finest and most abundant kind of combustion, meets with a tremendous amount of friction.

The principal cause of this friction Mr. Cowan does not cover, except in a brief paragraph. That is the human element. To my mind the subjective attitude of the American business man has very serious consequences, not only to his own business but to the economic welfare of the nation.

Everyone is familiar with Dr. Klein's estimate that some eight to ten billion dollars are wasted every year largely in the distribution system. Place this figure against the aggregate of industrial net profits, and you see immediately what a tremendous factor is involved. Then bear in mind that industrial profits determine not only the American family's income and spending power accumulated in dividends, but to a large extent its income and spending power accumulated in the form of salaries and wages. Go a step farther, and curtailment of individual income reduces national demand and affects industrial output. Therefore any waste of industrial funds is important economically. The executives upon whose shoulders rests the elimination of waste bear a heavy responsibility.

What have they done about it? They have developed into extremely efficient production men. Some authorities estimate that production costs of all commodities have dropped 20 per cent in recent years. In certain industries they have undoubtedly dropped considerably more.

Along with actual mechanical, production efficiency has come efficiency in the use of man power. Not only have machines been developed to replace men, but men themselves have been trained to accomplish more. Personnel management, adoption of better time schedules, improvement of lighting and other things have made men more efficient.

Then in the credit department, relations with customers have been put on a more efficient basis by combining financial requirements with the personal element. Better use has been made of borrowed funds, of reserves for contingencies, etc.

Much has been done to improve transportation of the goods produced. Motor trucking, freight, express, mail, water shipping, even air shipping, have played important parts in quick, economical turnover.

All of these things have been problems at hand, which a subjective type of mind could solve. In a game of checkers the moves are under your eyes. In a game of bridge, not only what the other fellow has but the way he uses what he has is extremely important. One cannot play bridge with thirteen cards. The whole fifty-two are necessary. Play the game awhile with the same group of people and you get to know pretty much what cards they lack and how they think. You cannot conduct a war without field glasses and an intelligence division. If you had your eyes on your own armies, navies and supplies only, you would not get very far.

The same thing is true in the marketing of goods. You can produce goods with your attention entirely on the product, and sell them if what you have made happens to meet with public approval. If it does not, you cannot continue to produce at a profit.

Marketing costs during the past few years have sky-rocketed. Advertising and sales expenditures have mounted to colossal sums. Similarly the whole distribution system has taken on a very expensive aspect. So long as the industrial executive permits the economies which he has effected in production to be wasted through inefficient marketing, the result will not only be a loss to his own company but an economic loss of wide importance.

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[3] President, Crossley, Inc., New York, N. Y.

In the past year of depression a large number of companies have made money. Yesterday I read the report of one well-known company which had gone on a five-day week basis, maintained its wage scales, spent a tremendous amount for advertising and reduced prices, and yet had shown an aggregate net profit that compared favorably with the highest in its history. The final Wall Street edition is not all sad reading by any means. You will see some of the stocks quoted at very good levels. The reason for this is not only the fuel mixture of deep-seated want plus the product. The secret lies in management. A small number of companies sold practically as large a unit volume of goods last year as the year before, but they used a lot of red ink for the balance sheet.

The hardest job that those of us in the research business have to do is to impress upon manufacturers what research is and why it is needed. Last Sunday I cut out of the New York *Times* a clipping from the business section which says: "Consumer demand, by which is meant what the public needs or wants at the prices which that public is able to pay, continues to be a neglected study in too many instances. Even in the midst of this depression it is pointed out that there is little real investigation of the consumer market and adaptation of products and prices to meet it. Many manufacturers are standing pat on their offerings and wondering why sales volume constantly dwindles. Given a newly fashioned product at the right price, it is argued, and their factories might be humming full time."

Suppose we go ahead and make a survey or a sales analysis of company records, or set up an advertising plan, and in every possible way utilize the component parts of a sales plan which Mr. Cowan would list under the term "combustion." All of these things crash and fail frequently in the "front office." The chief executive says: "That was a very fine piece of work you did. I have only just had a chance to glance at it." And that is all he ever does in some instances. There is too much reckless spending of money, not only in advertising and sales plans but in the gathering of information for those plans. This information should be, but is not, put to practical use. Our own experience is that two to three years often pass before important recommendations based on research are put into effect. Here is very serious friction.

The keynote of Mr. Cowan's paper is the power of sincerity in a sales plan. The many instances which he cites in support of this premise are so convincing that we cannot gainsay the existence of such power. I think everybody will agree that in the end sincerity, truth and honor in advertising and all business relations win out, but in the battle between sincerity and its many foes, the other side often seems to be winning. Included among these foes would be luck, as well as fraud. Have you ever considered how much effect one popular event will have upon business? Lindbergh refused advertising offers, but suppose he had accepted something. Coming out of obscurity he laid the basis for a large fortune by thirty-six hours of flying. Not only could his personal fortune have been enhanced if he had accepted certain advertising offers, but the sales plan built around his name would have had such a psychological effect that it unquestionably would have produced large volume. Sales volume means employment. Employment means purchasing power.

Pepsodent, of course, was very successful years ago, as Mr. Cowan pointed out. But what has made Pepsodent lately? Perhaps you can say that it is the fuel mixture of a deep-seated want for entertainment plus the entertainment. Certainly entertainment has played a very important part in the sales curve of Pepsodent during the last year or more. Two comedians go on the air, strike the public fancy and up goes the curve. Take the example of Listerine, if you want. How much of the success of Listerine is due to the actual belief on the part of the American public that they ought to have it, and how much is due to the psychological acceptance created by name publicity? Mr. Cowan speaks of a certain cigarette. Everywhere I go I hear people say that the consumer does not take seriously the toasting process, the violet ray, the mellowing and purification by sunshine and all that sort of thing. Many people are amused by it, but they read it, listen to it, talk to each other about it, and buy. Perhaps the American Tobacco Company recognizes that pelting power. I wonder whether the announcer of their radio hour uses that peculiar inflection of his voice in logical argument or in the attempt to get over a slogan. It grates upon some people and yet Lucky Strike is one of the best selling cigarettes. I have heard it said that the United Cigar Stores, because of the conditions under which they must purchase Lucky Strikes, do nothing whatever to push the sales in competition with other brands, but Lucky Strike goes on and on.

Let us take the matter a step farther and look at the number of cigars, automobiles, tooth paste and other products depending entirely on some form of name publicity. It is a well-known saying in the advertising business that much copy is so written that the substitution of a competitive product would apply just as well. Take the testimonial. How much of its effectiveness depends upon name publicity? Actually, how many people buy toilet soap because a large number of movie actresses were given samples of the product and now use it? What bank has made you open an account on the basis of the history of a city? What motor car has appealed to you because its copy, like that of many other cars, deals with comfort, convenience, design and all the other "old stuff"?

I am wondering whether *one* of the most potent forces in the sales plan today is not some sort of a catch phrase which will make the public think about the product up to the point of actual purchase. You cannot sell on the air. By that I mean, you are not allowed to mention prices or to present any strong selling argument. And yet look at the successes that can be attributed to radio broadcasting.

Summing up, then, it would seem to me that a major discussion point on which Mr. Cowan's paper scarcely touched is the great importance of the chief executives or the board of directors in the management of the sales plan. At their door lies a very great responsibility—the efficient use of these driving forces which Mr. Cowan mentions. For their own good and for the economic good of the nation, executive management must not only examine into and bring about the best fuel mixture and mechanical motion, and apply scientifically the elements of combustion, but it must eliminate so far as possible the manifold problems of friction. This means a reduction in the huge wastes in advertising, selling plans, distribution and allied factors of the market.

The human element must be followed very closely. The subjective attitude will not work. Industrial executives must think of production in terms of what the public wants. They must think also of all forms of selling, advertising and marketing in terms of what the public wants. Sincerity and logical fact play an important and permanent role but executives cannot afford to overlook the great American desire for entertainment and the great American receptivity to catch phrases, slogans and name publicity. Name publicity for many products is vital to success and often carries the load temporarily, with a minimum of scientific background. Permanent success needs both.

W. E. Freeland.[4] It is almost impossible to discuss Mr. Cowan's paper. I think we are all taking the attitude that all we can possibly do is to amplify it slightly. I am going to take you over into the industrial field for just a minute because I have gone through a transition which has been very interesting.

I was formerly pretty closely associated with Stuart Cowan, but in the last few years I have devoted much of my time to the actual management of business enterprises. At the present time I am trying to run five widely different businesses, and because of that can perhaps be said to have acquired a practical viewpoint.

I wish Mr. Cowan had discussed something of trade resistance, as well as sales resistance. It is the trade which serves the consumer, rather than the ultimate consumer himself, that offers the biggest battle to many of the best ideas offered.

I would like to mention an industry which manufactures insulating material made from rock wool, which, according to the Bureau of Standards, is the best insulating material made, but which had been an absolute failure over a period of eight years. This business has been through at least four reorganizations. In the last effort prior to the present successful one a lot of money was spent trying to induce people to put this product around their household boilers because it would effect a great fuel saving, keep the cellars cool, etc. Even though these arguments may have been sound, it was too costly a marketing process for this purpose. Therefore the next logical thing to do was to find another market.

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[4] Freeland, Bates & Lawrence, Inc., Boston, Mass.

In 1929 a new type of product was designed after a study of the probable use of insulated gas and electric ranges. A few of the leading manufacturers had been experimenting along this line. An attempt was made to interest them further, even to the extent of helping them design stoves. They started out in the belief that they might do something with this idea and one bold soul said that they might get 15 per cent of their product into this higher-priced, insulated stove market. I am talking now of 1929. Before the end of 1930, some of these people found nearer 60 per cent of their entire sales consisted of this insulated product. One company, which did a typical research job and brought forth a new, interesting and stimulating product, found that the plant which designed this product, their largest unit, was unable to keep up with the demand for it. This was in the fall of 1930, a year of real depression. They had to bring another of their producing units in to help make this product. That very company alone has come to our organization this year and insisted upon making a contract with us whereby they alone are using more than the total capacity of our plant at this time last year. We do business now with a large number of other makers of insulated stoves. That was the definite study to find out if there was not a logical market in which the consumer, the manufacturer and the trade could be interested.

Let us take another case and look at it from the practical angle. The business of a manufacturer of one of our best-known orthopedic shoes was not sick but static. He did not want to induce a lot more people to buy the product; the desire was not to double and treble the number of outlets, but simply to get the established outlets to sell two more pairs of shoes per week.

We in America need to bring our vision down to the practical point which will change such a situation of static condition to one of successful accomplishment. We need to define our real objectives. Sometimes it is not easy to see these objectives. They may be in the vision of an individual only. I am thinking of such a company which is very sick financially. It has a flood of orders, relatively speaking, and no capital to fill the profitable orders. And what is the reason? The chassis of a shoe is the inner sole. There had been virtually no development of inner soles in the history of modern shoemaking. Then a man, after fourteen years of work as a trained tanning chemist, devised an absolutely new type of leather for an inner sole. Because of the higher tensile strength of this new product there was developed a whole new method of machine shoemaking which duplicates, in virtually every respect, the hand-welted shoe for which we pay $15.00 to $30.00 a pair. The biggest shoe manufacturer in this country today is using this new product and new process to make a shoe that retails at $6.50. You marvel when you see it; you wonder how the people who are making these $16.00, $18.00, $24.00 and $30.00 shoes will be affected.

This shows a conception, fourteen years old in one man's imagination, of a basic improvement which reached clear back into the chemistry of tanning. A new market situation is being created.

I am personally interested in another business, the manufacture of dynamic loudspeakers. There we have a test case of trade and even manufacturing resistance. Last spring it became known to some of us that on the Pacific coast a new product called a midget radio had sold four to one in competition with the standard console sets. As a result we went around and talked to some of the larger manufacturers of radios. With an almost unanimous voice they said, "There is nothing to this midget business. We certainly are not going into it. We are not going to make radio sets at $59.50 and spoil our sale on the $200 and $250 sets. We do not believe that the public has any desire for these sets."

We went to the public. We found immediately that there was a market and therefore hastily designed a midget speaker which would be as good as the concert speaker. The business I mentioned had lost heavily up to the end of last June because of the chaos in the radio business. We wound up the year with a profit. Of all the speakers made in the last six months of last year, 78 per cent were midget speakers. Yet the trade had with a unanimous voice told us we had no market there; there was no sense in our going ahead with it.

Some of you probably came here expecting a typical Taylor talk on planning as part of all the methods work in business. I want to leave this audience with one thought that I am trying to leave with every audience, and that is, that these wastes that Mr. Crossley has been talking about are to a considerable extent due to the absence in the merchandising and industrial marketing fields, of that cost accounting which is one of our most successful tools in the production field. The day is coming when we are going to check and inspect both the basic master plan, which has been so ably described here today, and the intimate working plans, by the adoption and analysis of costs which are going to give us the real picture of the relative efficiencies of these methods. There is just as big a job of planning the methods to bring about results in this picture as there is in the field of production. The research work remains largely to be done. The actual job of planning and the adaptation of cost accounting can literally be borrowed from the field of production. It is up to those of us in the marketing field to bring about a new condition of reduced waste by doing research work and by borrowing from already established methods.

Paul T. Cherington.[5] There can be no criticism of Mr. Cowan's main idea that effective approach to mass markets calls for a satisfactory combination of a human desire and an inducement to go about the job of satisfying it.

Concerning his treatment of the subject, however, it seems to me that there is a good deal to be said in the way of criticism. My disagreement with him in the way he handled his subject is fundamental and has to do mainly with two separate things.

First of all, it seems to me unfortunate that in discussing planning for sales he should devote so much emphasis and attention to showmanship. Necessarily, any effort to deal with the consuming public has to have a certain element of showmanship in it, but when one is discussing planning for sales it seems a bit unfortunate to exclude planning so completely for the sake of this more spectacular phase of the subject.

The second point in which I find myself in disagreement with Mr. Cowan is in the fact that practically all of his illustrations had to do with minor strategy rather than major strategy in sales. Many of the cases which he told about would have been much more satisfactory illustrations of planning for sales if he had called attention to some of the more intricate details in the sales history following the advertising efforts he mentioned.

One important phase of major strategy, of course, is the recognition of the general contour of the growth curve and the establishment of the position in its normal development which the concern occupies at any given time. For example, the strategy in dealing with the public which is called for in the early stages, represented by the slow growth portion of the normal growth curve, is very different from that called for in the second phase, or period of rapid growth, or in the third phase of so-called stabilization.

Stuart DuBois Cowan. There is one point I would make in support of the idea that there is a primary driving force which is all important, as illustrated by the shoe-development, the insulating-material and the radio examples which Mr. Freeland mentioned. We advanced some rather dramatic and interesting cases with which you are all familiar. But you may have had the feeling that there is something anti-social about developing inducements that satisfy wants.

I have felt for years that if the whole United States were just one company, and Mr. Clark, Mr. Crossley, Mr. Freeland and other members of this Society constituted a planning committee, it would be possible, without any export business whatever, to quadruple the income of our 25,000,000 families by providing and distributing to them the merchandise necessary to satisfy their real wants.

This point of view considered logically, instead of being anti-social, is rather pro-social.

In 1914, being much confused by the water-tight compartments which seemed to mark off our numerous economic and money and banking courses, I prepared a cycle chart in which I tried to relate them, placing the people with their wants at the top, industry at the bottom, and showing that the net result of all industry is its finished products. The steel mills, the railroads, the mines, and all the basic industries are after all controlled by the finished products (homes, shoes, radios, automobiles, etc.) that pass into the hands of individual families. In other words, the whole vast structure is not unlike an iceberg with one-eighth of its mass above the water, and seven-eighths below. If, then, the relationship between products and all their industrial background is in a ratio of one to eight, and you increase by 10, 50 or 100 per cent the things people want, you will automatically accelerate all industry. This will cause all manufacturers to have more business, which they will pay out in the form of wages, and you will have the surplus of that money flowing back to investors.

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[5] Director of Research, J. Walter Thompson Company, New York, N. Y.

When this thought occurred to me, and I tried to work it out in this cycle treatment, I was told to file it away; that if I persisted and presented it to business men and bankers they would think I was socialistic and unreliable. However, the thought has been in my mind for years, that if the true wants, the real wants, are ascertained, by serving the people on that basis our income could be increased enormously.

So this line of thinking, far from being anti-social, as you might surmise from the mention of drug products, etc., goes down to the fundamental planning of the entire situation.

I think it would be interesting indeed if Mr. Crossley could give a paper on research. There is no question as to the importance of the emphasis which he places upon it, and those of you who may be interested will see that we have been just as much concerned with its importance as Mr. Crossley has been.

I think that Mr. Freeland's point about friction and cost accounting is so important that when the time comes it would be very interesting to have a paper from him on that subject.

Also a paper by Mr. Clark on energy losses in the propagating and developing of inducements would be educational. It is so vital that in due time we ought to have him cover it in detail.

To revert to this "anti-social" factor, this *inducement* as we see it: It may be a new and better product. It may be, for instance, as in the case of that insulating product, that it actually gives much better service. It may be a new design, as in the case of the orthopedic shoes. It may be a better price. It may be packing which keeps the product fresh. It may be service. It may be a new use for a product that has a real human value. It may be simply the interpretation of what is already there from the consumer's angle. It may be any one of a dozen things, but if it is related to a human want, it is serving a human need.

If you do what the Tide Water Oil Company did and produce a better oil and gasoline, or what that radio company did in giving the public the type of speaker it wanted, what you save in sales cost is so great that the incentive in the next ten or twenty years for finding out what the public really wants, or what its latent wants are, is going to provide enormous profits and volume, and at the same time confer enormous benefits.

A Visit to Boxly

ON APRIL 30 at 4:30 P.M. Taylor Society members and guests who were attending the Society's spring meeting in Philadelphia had the privilege of visiting Boxly, the Chestnut Hill home of Frederick W. Taylor, as guests of Mrs. Taylor at tea.

The season and weather were perfect for walks in the garden between the famous box hedges and for views of the Wissahickon Valley from the large main-floor windows which Mr. Taylor had specially designed.

The seventy guests enjoyed browsing in Mr. Taylor's library where Mrs. Taylor has gathered together much Tayloriana. All were asked to autograph the engrossed testimonial of appreciation which had been prepared for presentation to Mrs. Taylor.

Mrs. Morris Llewellyn Cooke and Mrs. Harlow S. Person assisted Mrs. Taylor as hostesses.

Participation in European Management Events

DR. AND Mrs. Person sail on the S. S. "Lafayette" on June 18 for a three-months tour of Europe. The trip will begin with Dr. Person's participation in the International Management Institute's conference, which will be held at Geneva, July 1-4. Rationalization and cooperation for management study will be the subjects discussed. Major Urwick, Managing Director of the Institute, will direct the conference.

One of the key papers of the International Industrial Relations Congress in Amsterdam, August 23-28, will be presented by Dr. Person. The general subject under discussion will be "Social-Economic Planning," while Dr. Person will speak on "Scientific Management as a Technique of Progressive Industrial Stabilization." It is expected that the congress will draw those interested in industrial relations from many parts of the world. Of our members Mr. van der Leeuw, Miss Fledderus and Miss van Kleeck will take an active part in the meeting.

The British Association for the Advancement of Science is holding its Centenary Meeting in London, September 23-30. Dr. Person has been asked to present a paper on "The Aims, Methods and Progress of Research Into Management Problems" before one of the sectional meetings of this important gathering.

Between these conferences Dr. and Mrs. Person will visit the centers of Taylor Society membership in Czechoslovakia, England, France, Germany, Holland, Italy, Sweden and Switzerland. As well as carry the greetings of the Society to members and friends in these countries, Dr. Person expects to compare experiences and problems in scientific management to the end that the sort of international spirit of inquiry which should exist on this subject may be furthered.

Past President Addresses College

AT THE tenth anniversary of the reorganization of Antioch College, on May 9, Henry S. Dennison, past president of the Taylor Society and president of the Dennison Manufacturing Company of Framingham, Mass., spoke on "The Problems of Organization Engineering."

He said that managers of human beings, like electrical engineers, should aim to align their human forces so that they act with least friction in the desired direction. For this purpose there must be an organization fitted to the particular task to be done; planned in adjustment to the external environment and the type of workers as well. Mr. Dennison showed the function of staff departments to be the facilitation, by special study, of some function running throughout the line organization. It is this that he defines as functionalization. He stressed the need for co-ordination between heads of departments, and the danger of water-tight division between them. The machinery of cross contacts, he said, such as advisory committees, staff offices, etc., would have to be worked out in relation to the particular organization. He concluded with a warning against rigidity as "a disease which is most likely to prove fatal to an industrial organization."

President Morgan talked on "Co-operation in the Next Decade." This was in relation to the future of the co-operative plan at Antioch. He indicated that the plan could adapt to either of two tendencies in the modern world—either toward wide distribution of the benefits of mechanical progress, or toward concentration of them in the hands of a few, with a resulting increase in unemployment and poverty. President Morgan stated that the college will attempt to train students to follow the first course as builders of a new industrial order.

Back Numbers Wanted

We are constantly receiving requests for certain numbers of the BULLETIN which are out of print. Members or subscribers who do not bind their BULLETINS will be doing a real service by sending their copies of these issues to the Taylor Society office. We shall be glad to pay fifty cents a copy for them and can assure the senders that they will be put to important educational uses.

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Reviews

The Problem of Maintaining Purchasing Power. A Study of Industrial Depression and Recovery. By P. W. Martin, P. S. King & Son, Ltd., London, 1931, pages xiv, 314.

This book is a contribution of first-rate importance dealing with business cycles and the possibility of ameliorating or eliminating them. This does not mean that all of Mr. Martin's conclusions and the steps by which he has reached them will be accepted by every economist. It does mean that he has written a book which must be read by every student, economist, and business man who wishes to acquaint himself with the more important studies of the "causes" and "cures" of business booms and depressions.

A caviling and superficial critic might assert that Mr. Martin presents nothing new, but merely dresses up more elaborately the theory he enunciated in his first book, "The Flaw in the Price System" (1924). Such a criticism would be quite unfair. This book may be described, accurately enough, as the "Flaw" infant grown to maturity.

Mr. Martin has embodied the results of ten years of faithful, painstaking research and thinking in his latest book. During this period he has had the great advantage of studying a year under the guidance and inspiration of Professor Wesley Clair Mitchell, who has done more than all other economists to clarify and systematize the theories and statistics bearing on business cycles. Naturally the impress of these further studies are manifest in a fuller and more accurate exposition as well as a greatly improved style.

Mr. Martin, after due consideration, accepts the good old economic doctrine that general overproduction is impossible when means of payment in commodities is meant; but he thinks that general overproduction can and does exist when means of payment in money is meant.

His main thesis can best be expressed by a quotation:

> The question with which this study is chiefly concerned is whether or not there can be a general deficiency of purchasing power. . . . Usually, in the literature on the question, what is here termed a "general deficiency of purchasing power" is referred to as "overproduction" or "underconsumption." The expression "overproduction" is sometimes objected to by reason of its implication that all the needs of the community have been met. "Underconsumption," the term inserted to replace it, is not altogether suitable, as laying emphasis on the consumption of goods rather than upon their purchase. The phrase "deficiency of purchasing power" is used in preference to either of these two terms inasmuch as it brings out the essential point that goods have to be purchased, and that for this purpose "purchasing power"—money in its various forms—is required. (p. 3)

The author holds that although a fundamental tendency to equilibrium exists between goods for sale and purchasing power, this equilibrium is often upset by: (1) additions to or deductions from working capital, leading respectively to deficiency or superfluity of purchasing power; (2) voluntary additions to or deductions from the money value of commodity stocks held by industry, causing respectively a superfluity or a deficiency in purchasing power; (3) additions to or subtractions from the quantity of money in circulation, causing respectively a surplus or a deficit in purchasing power; (4) wages paid before and dividends paid after the sale of products, causing respectively surplus and deficit in purchasing power.

Disequilibrium between purchasing power and goods for sale causes price inflations and deflations which are accompanied by "booms" and "busts" in business.

To prevent these ups and downs in business, purchasing power must be kept stable. Central banks cannot be expected to maintain stability of prices, exchanges, finance, and business, with only open-market operations and changing of the discount rate to work with. A necessary additional measure is long-term planning of public works in all countries. International action is suggested to reduce the gold-reserve ratios against note and deposit liabilities which are now required by law. The author vaguely suggests that the International Labor Conference should adopt a Draft Convention "providing for the maintenance of purchasing power as a means of reducing unemployment," but no hint is given as to how such action could be made effective.

The author pauses at frequent intervals to review and summarize the steps already covered by him in the development of his theses. This is an excellent plan, but there can be overproduction of repetitions and summaries as well as of wheat, rubber, autos and every other good thing. The book would be less wearisome to the reader and quite as intelligible had the author exercised more control over his summarizing capacity.

Royal Meeker[1]

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[1] Irving Fisher, New Haven, Conn.

The Menace of Overproduction — Its Cause, Extent and Cure. Edited by Scoville Hamlin, John Wiley & Sons, Inc., New York and London, 1930, pages x, 202.

In "The Menace of Overproduction—Its Cause, Extent and Cure" the editor offers a cross-section of expert opinion both comprehensive and authoritative.

Stuart Chase, in the foreword, commends the use of the symposium form of presenting facts and suggestions for constructive action in this matter of overcapacity and unemployment.

In carefully prepared chapters competent authorities, representing the several industries (coal, petroleum, cotton, wool, silk, rayon, radios, steel construction, etc.), describe the faulty conditions and the difficulties in each, and offer suggestions tending to a solution. The position of our agriculture is discussed from two points of view; also the influence of advertising, our present-day place in world commerce, wastes inherent in too small-scale operations, and the growth of industrial and financial units are discussed in other chapters.

Dr. Virgil Jordan's treatment of "Overproduction and Business Organization" and Dr. H. S. Person's "Management and Overproduction" are chapters which will be read and re-read by the careful student of present-day trends.

In this mass of evidence are contained the facts which indicate the direction in which industry's leaders must move to effect permanent improvement.

Many causes, in cumulation, have led to the present-day condition. Although each contributor to Mr. Hamlin's symposium writes from his own background, a most interesting agreement on the nature of the handicaps and difficulties and on suggestions corrective therefor, runs through the writings of all of the contributors. In his final chapters the Editor presents more evidence of his own and draws a comprehensive summary of the constructive proposals of the contributors. In these chapters there are developed the ideas (among others) that the cost of upkeep of capital is being neglected in present-day prices with an unsuspected bad effect upon true income; that the conservation of natural resources is no longer a question of altruism but is one of absolute necessity if higher and higher standards of living are to be enjoyed by the peoples of the world; that no longer do the tariff, direct taxation, profits, or corporations serve as brakes and governors upon the rate of industrial expansion.

Among the contributors are C. E. Bockus, President, National Coal Association; E. P. Salisbury, Statistician, Standard Oil Co.; Henry P. Kendall, President, The Kendall Company; A. D. Whiteside, President, The Wool Institute, Inc.; Thomas B. Hill, President, The Silk Association of America, Inc.; John E. Bassill, Vice-President, Tubize Chatillon Corporation; Dr. O. E. Baker, Senior Agricultural Economist, U. S. Department of Agriculture; Dr. J. G. Lipman, Director, New Jersey Agricultural Experiment Station; Herbert H. Frost, President, Radio Manufacturers Association; Charles F. Abbott, Executive Director, American Institute of Steel Construction; Henry Chalmers, Chief, Division of Foreign Tariffs, U. S. Department of Commerce; Paul H. Fassnacht, President, Rudolf Mosse, Inc.; Sir Henri Deterding, Royal Dutch Shell Co., Paul T. Cherington, Director of Research, J. Walter Thompson Company; Francis H. Sisson, Vice-President, Guaranty Trust Company; Dr. Virgil Jordan, Economist, McGraw-Hill Publishing Company; Dr. H. S. Person, Managing Director, Taylor Society, New York.

H. V. R. Scheel[2]

Racial Factors in American Industry. By Herman Feldman, Harper & Brothers, New York and London, 1931, pages xiv, 318.

No one who is interested in problems of human relations in industry, whether these relations are between the manual workers of one race and those of another of the same color, or between the black race and the white race, the oriental and the occidental, or in the relations between manual workers and the representatives of the owners, can read Professor Herman Feldman's book on "Racial Factors in American Industry" without having his interest stimulated and his knowledge greatly broadened. Or even if the reader should have slight knowledge of industry and should his experience be largely in other fields of human activity, still would he be stirred deeply by the pictures which Mr. Feldman draws of the deep, irrational, and bigoted prejudices of the dominant races toward the so-called inferior races.

It would seem as if 190 closely written pages, giving most profuse and detailed information about the complexities of all kinds of human relations in industry would exhaust the reader and cause his interest to slacken. The very opposite is true because there is such a store of the most significant and disturbing information in Mr. Feldman's book that to the socially conscious reader every page is important and stimulating.

The second part of the book which suggests remedies is not only very helpful in suggesting approaches to the solution of the problems between races in industry but, because of the unusual insight of the writer into human maladjustments, much of his discussion can be used to advantage by the personnel departments of any business to include every problem of human relations. It is a temptation to quote freely from such an important book but I must confine myself to two as follows:

"The personnel department in a plant, according to the best current conception, is primarily an educational agency in matters of labor relations. It is its duty to administer the agreed-upon procedures in recruiting and maintaining a labor force so that efficiency may be obtained; but if it cannot influence the policies of the concern to the extent of improving its attitudes toward labor and reconsidering the established practices, it has missed its distinctive function. If the attempt has not been made, the personnel manager is an unimaginative or ineffective routineer."

"The winning over of that skeleton group of lesser executives, superintendents and foremen, who for most practical purposes decide the conditions under which the mass of the workers shall labor is the *sine qua non* of further progress. Without the co-operation of this group, a plant policy does not function, whatever may be the theory of the matter in the mind of the chief executive or board of directors."

Not only can this book be used to great advantage as a text book in the handling of conflicts between different races in industry but chapters eight and nine will be particularly helpful to those owners who wish to develop democratic policies of all kinds within their plants.

Of all the books I have read on human problems in industry this has been the most stimulating and has come closest to my own fourteen years of experience in an attempt to develop complete democratic government, in fact, complete workers' control in the plant of the Columbia Conserve Company.

W. P. Hapgood[3]

Management Problems. (With Special Reference to the Cotton Textile Industry.) Edited by G. T. Schwenning. The University of North Carolina Press, Chapel Hill, N. C., 1930, pages xiv, 264.

The papers by Mr. Henry P. Kendall, of The Kendall Company, Boston, alone make this book worth while. His enthusiasm for scientific management and the excellent illustrations of his applications of these principles to the company under his control show what can be done in a rather disorganized industry. Other papers, principally those of Mr. Bernard M. Cone, of the Proximity Manufacturing Company, and Professor C. T. Murchison, of the University of North Carolina, discuss some needed changes.

This book, conceived perhaps as a missionary enterprise, can be listed as further evidence of an "awakening South." In this case it happens to be a South awakening to the influences and possibilities of scientific management. The content, too heterogeneous for treatment in a review and in part only of general interest, consists of a series of addresses delivered at the University of North Carolina during the academic year 1929-1930 and was designed especially for and presented to the University of North Carolina Student Branch of the Taylor Society.

John J. Hader[4]

Studies in the History of Statistical Method. By Helen M. Walker, The Williams & Wilkins Company, Baltimore, 1929, pages viii, 229.

As the title indicates, Dr. Walker's book does not pretend to offer a systematic text on the historical development of mathematical statistics. It comes closer to being a collection of bibliographical notes on the contributions to mathematical statistics by the English biometricians under the leadership of Karl Pearson and his disciples. As such the book is an excellent compendium to the earlier texts on the history of the theory of probability by Todhunter and Czuber. But preciously little is said by the author in respect to the work done during the past fifty to sixty years by Scandinavian, Russian and Italian statisticians, although much of this work is superior to that of the Pearsonian school.

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[2] Vice-President, Botany Consolidated Mills, Inc., New York.

[3] President, The Columbia Conserve Co., Indianapolis, Ind.

[4] The Inquiry, New York, N. Y.

Miss Walker, as a matter of fact, seems to have followed a bit too closely in the footsteps of the English biometricians. Professor Karl Pearson, unfortunately, does not rank as a high authority on historical matters where it often becomes necessary to combine fervent sympathy with glacial judgment. The eminent Englishman has plenty of fervor, bordering on the verge of eloquence, as it were, but the glacial historical judgment seems to be lacking.

Certain critical references by Miss Walker on Todhunter's description of the work of De Moivre appear to have been influenced by some of Pearson's vigorous editorials in "Biometrika." To the present reviewer Pearson's criticism of Todhunter seems picayune, if actually not unjust and faulty.

We all are biased more or less, and Dr. Walker's preference and enthusiasm for Galton, Pearson and their disciples is perhaps not any worse than my own preference for the Scandinavian school under the leadership of Gram, Thiele, Westergaard and Charlier. But unrestrained and indiscriminating admiration is apt to magnify the innovator somewhat out of proportion, and to fix an iridescent nimbus, a veritable halo of sanctity about his head. Such things are apt to happen in foggy weather.

Adhering to the adoration of Pearson for Francis Galton, Dr. Walker pays, for instance, a glowing tribute to the alleged founder of the correlation theory and the famous theory of regression. One might have wished that Miss Walker had mentioned Johannsen's famous experiments on heredity in "pure lines" from the period 1903-1910. These experiments have served to take Galton's "law" of regression down from its pedestal. Interested readers might indeed do well to look up the chapter on Francis Galton in Nordenskjold's "History of Biology" after having read Miss Walker. The glacial judgment of the Swedish biologist mingles well with the sympathetic fervor of the American pedagogue and gives us a pretty good idea of the actual position of Sir Francis Galton in biological work.

Another evidence of rather indiscriminating admiration is found in Dr. Walker's mention of the numerical tables of the probability integral by Sheppard and her complaint that future authors do not always make "acknowledgment of the *stupendous* (italics are mine) labor he (Sheppard) performed that the labors of others might be lightened."

This comes, to borrow a striking phrase from Norman Douglas, dangerously close to an effort to "further the interests of the ego at the expense of the environment." Any ordinary computer could have done this work after the previous computations by Kramp, Encke and Glaisher. Moreover, since we are discussing historical facts, it may be of interest to point out that the Danish actuary, Thiele, anticipated Sheppard by more than a decade. For in Thiele's 1889 Danish text on "Almindelig Iagttagelseslaere" there is also a table of the probability integral in practically the same form as Sheppard's table, the only difference being that Sheppard has introduced a common factor which equals the reciprocal of the square root of two times "Pi," or 0.3989422. Where lies, one might ask, the "stupendous" task in multiplying by this latter number, after we have had available since 1889 the table by Thiele?

A large part of Dr. Walker's text deals with the development in America of statistical work in the realm of psychology and education. When we bear in mind from former experience the at times specious and ephemeral success that has attended elsewhere similar efforts, we can well afford to discount the author's praise of Dr. Cattel for instance. Again one may be unduly biased, but it seems at least that in comparison with a psychologist of the type of Lehman of Copenhagen, for instance, (whose work is not mentioned by Dr. Walker) Cattel's work is of preciously little account.

The above criticisms leave unaltered, however, the fact that Dr. Walker's treatise gives perhaps the best survey of the modern English statistical school as yet available in handy book form. For many years to come, future critics will have to turn to her book as the most valuable historical information on certain phases of modern statistical research. One might indeed wish that Dr. Walker could be induced to do a similar piece of bibliographical research in relation to several of the modern continental statistical scholars.

ARNE FISHER[6]

Present-Day Labor Relations. By Paul F. Gemmill, John Wiley & Sons, New York, 1929, pages ix, 312.

The purpose of this book, writes the author in his preface, is to examine critically the leading types of collective negotiation, and to review their merits and defects from the point of view of employer, employe and the public. In the main this promise has been performed with a breadth of outlook which gives soundness to the book's point of view and general conclusions. The central emphasis upon equality of bargaining power as one of the important criteria of effectiveness in joint relations is good, as is also the insistence that genuine provision for disinterested arbitration should be provided. The description of plans and types is informing and compact.

If the book lacks in a certain dynamic quality, that may be due to its reliance upon secondary sources. The flavor of the study is stronger than the atmosphere of the shop. This tends to make the author timid and lacking in self-reliance as to his conclusions—where he might with greater effectiveness take fuller responsibility himself and show more affirmative courage. The otherwise admirable last chapter, to which his philosophizing is largely confined, suffers in this respect. An argument which develops too largely from the quoted support of a few selected writers of other books loses in conviction, especially to the unconvinced.

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[6] Mathematician, The Western Union Telegraph Company, New York, N. Y.

A case in point is the discussion of the social consequences of scientific management, where the author quotes only the English economist, John A. Hobson; and fails to focus such material as is to be found in Hunt's "Scientific Management Since Taylor" or in numerous recent BULLETINS OF THE TAYLOR SOCIETY.

This is a useful and suggestive volume and it should exert a healthy influence in the thinking of many executives. Yet its internal strategy will, I am afraid, handicap it with this important audience. All of us who write on industrial subjects should, far more consistently than we do, ask ourselves as we sit down to write—"Am I writing in this way because I enjoy saying it, or because I am sure that written in this way it will carry the widest possible conviction?"

ORDWAY TEAD[9]

Restriction of Output Among Unorganized Workers. By Stanley B. Mathewson, with chapters by William M. Leiserson, Arthur E. Morgan and Henry S. Dennison, The Viking Press, New York, 1931, pages x, 212.

This is the first book to deal in a factual way with the extent of conscious restriction of output among unorganized workers. The accumulation of evidence is impressive and important. Of particular interest to scientific management devotees is the discussion of restriction in relation to incentive methods of payment and in relation to the use of time study. That the relation of the worker to the introduction of the refinements of scientific management is still an unsolved problem is certainly suggested by these findings.

The author has well stated his own conclusions as follows:

"1. Restriction is a widespread institution, deeply intrenched in the working habits of American laboring people.

"2. Scientific management has failed to develop that spirit of confidence between the parties to labor contracts which has been so potent in developing good-will between the parties to a sales contract.

"3. Underwork and restriction are greater problems than over-speeding and overwork. The efforts of managers to speed up working people have been offset by the ingenuity of the workers in developing restrictive practices.

"4. Managers have been so content with the over-all results of man-hour output that only superficial attention has been given to the workers' contribution or lack of contribution to the increased yield. Attempts to secure increased output have been marked by traditional and unscientific methods, while the workers have held to the time-honored practices of self-protection which antedate time study, bonus plans, and other devices to encourage capacity production.

"5. The practices of most manufacturing managements have not as yet brought the worker to feel that he can freely give his best efforts without incurring penalties in place of the rewards which usually accompany special attention to duty in other fields of endeavor. Regardless of how much the individual may or may not desire to contribute a full day's work, his actual experiences often turn him away from good working habits."

A somewhat more analytical summary of possible conclusions appears in Professor Leiserson's excellent chapter. He points out that the restriction of output appears to be prompted by three types of fear.

"1. Rate cuts, re-timing of jobs and 'wage-incentive' plans which require the workers to deliver additional work at lower rates of pay;

"2. Lay-offs, part-time work and protracted periods of unemployment which show that the market cannot absorb all the labor the wage-earners can give;

"3. Unintelligent management that depends for results either upon driving, economic power and other dictatorial methods, or upon appeals to the business interests of the employees without understanding that these are not necessarily promoted by turning out more work at lower rates of pay."

The following conclusions reached by Professor Leiserson will be read with interest and sympathy by all who are familiar with the increasing account which scientific management authorities are taking of the relation of manual workers to improvements in production technique. He says:

"Reasonable regulation of labor output can only be assured when the workers have a voice in determining the amount they will turn out, just as fair prices can be maintained only by allowing farmers and manufacturers intelligently to regulate production. But the standards of reasonableness applied to the workers must be checked by the standards of the employers. Give and take is needed, and open criticism and defense and subjection to public opinion and control in the interest of the community."

This book merits careful study and a wide reading among business men, for it emphasizes a problem which has both an ethical and an economic significance—a significance in no way lessened because at the present moment output restriction is the cry of the entire economic world.

ORDWAY TEAD[9]

Case Studies of Unemployment. Compiled by the Unemployment Committee of the National Federation of Settlements, University of Pennsylvania Press, Philadelphia, 1931, pages l, 418.

This book consists of three parts: a Foreword by Paul U. Kellogg, an introduction by Helen Hall, and 371 pages of the 150 case studies presented. This is Research Study XII of the Industrial Research Department of the Wharton School of Finance and Commerce, University of Pennsylvania, and is edited by Marion Elderton of that institution.

A review of this book is made very simple by the fact that Mr. Paul Kellogg himself does it. I cannot improve on his statement that:

> In this book, the settlements of the country offer for inspection the makeshift payroll of the unemployed—intimate loose-leaf records of what families turn in, humanly speaking, to take the place of their lost wages. . . .
>
> No such body of concrete cases, lifted from the industrial life of America the country over, has hitheto been available. They make up a source book of intimate and objective materials. Students of every facet of the complex problem will

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[9] Editor of economic and business books, Harper & Brothers, and lecturer on personnel subjects, Columbia University.